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Geotechnical
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DEP RTNs 3-23246, 3-24358, and 3-24376

Phase I Initial Site Investigation and Tier Classification

50 Tufts Street, Somerville, MA

Submitted to:
UniFirst Corporation
68 Jonspin Road
Wilmington, MA 01887

LOCAL
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June 16, 2006

Project No. 04516-0

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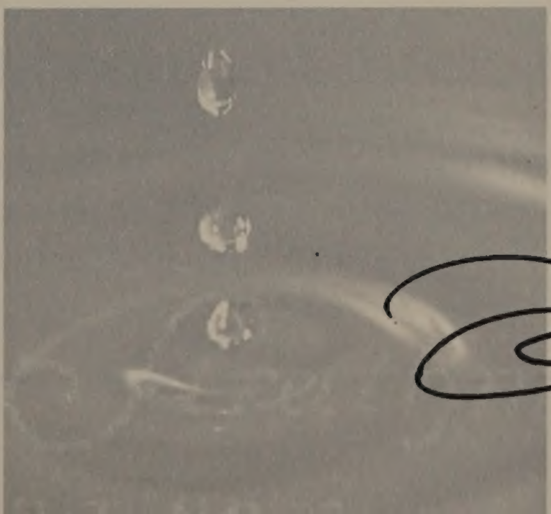

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Executive Summary

GEI Consultants, Inc. prepared this Phase I Initial Site Investigation (Phase I Report) and Tier Classification on behalf of UniFirst Corporation of Wilmington, Massachusetts, for the Site located at 50 Tufts Street in Somerville, Massachusetts (the Site; Fig. 1). This Phase I Report documents the results of investigations conducted at the Site from June 2002 through March 2005. Based on the results of assessments conducted through June 2002, the Site includes the 50 Tufts Street property (the Property), together with portions of properties located across that public street to the east of the Property. The Massachusetts Department of Environmental Protection (DEP) has assigned release tracking numbers (RTNs) 3-23246, 3-24358, and 3-24376 to the Site.

The Property is approximately 51,111 square feet and developed with an approximately 20,594 square feet one-story masonry block building. The majority of the building is warehouse space and a small portion is office space. The building was constructed in two phases. The northern portion was constructed about 1955 and was approximately 8,400 square feet. An approximately 12,200 square foot addition was constructed in 1977. From the mid-1950s through 2002, several different business entities distributed laundry and dry cleaning supplies at the Property. The Property building is currently unoccupied.

Chlorinated volatile organic compounds (VOCs), particularly tetrachloroethylene (also called perchloroethylene [PCE]), have been measured in soil, groundwater, and indoor air at the Site. The source of the chlorinated VOCs is likely associated with the historic handling, storage, and distribution of laundry and dry cleaning chemicals at the Site. The highest concentrations of chlorinated solvents in groundwater were measured in samples collected from a well at the northwestern-corner of the building. The highest concentrations of chlorinated VOCs in soil were detected in samples collected from two borings advanced within the building footprint on the western side of the Property building. VOCs were measured in an indoor air sample collected in the Property building.

Chlorinated VOCs have been detected in groundwater samples collected from monitoring wells across Tufts Street from the Property. In 2005, DEP conducted indoor air testing for PCE and other VOCs in a number of homes located on Tufts Street. DEP sent a letter to each homeowner summarizing the results of its testing and reported that the PCE detected during the indoor air testing was below DEP's "threshold limit" for "significant risk of harm to health over a short period of time" and "below the levels DEP typically finds in homes."

For purposes of Tier Classification, the Site was scored using the Numerical Ranking System (NRS). Based on an NRS score of 402, the Site is classified as Tier IC and a Tier I permit is required.

1. Introduction

GEI Consultants, Inc. prepared this Phase I Initial Site Investigation (Phase I Report) and Tier Classification on behalf of UniFirst Corporation of Wilmington, Massachusetts, for the Site located at 50 Tufts Street in Somerville, Massachusetts (the Site; Fig. 1). This Phase I Report documents the results of investigations conducted at the Site from June 2002 through March 2005. Based on the results of assessments conducted through June 2002, the Site includes the 50 Tufts Street property (the Property), together with portions of properties located across that public street to the east of the Property (Fig. 2). The Site is listed by the Massachusetts Department of Environmental Protection (DEP) under release tracking numbers (RTNs) 3-23246, 3-24358, and 3-24376. The Phase I Report and Tier Classification were prepared in accordance with the requirements of the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000).

1.1 Purpose

The purpose of this Phase I Report is to compile existing information for the evaluation and Tier Classification of the Site. This Phase I Report fulfills the requirements of the MCP (310 CMR 40.0483).

1.2 Scope

The activities for this Phase I Report and Tier Classification included:

- Reviewing previous investigation reports.
- Reviewing state and federal site databases.
- Reviewing available records at the city of Somerville municipal offices.
- Reviewing Sanborn fire insurance maps.
- Scoring the Site using the DEP Numerical Ranking System (NRS) scoresheet.
- Preparing a Tier Classification Form.
- Preparing a Tier I Permit Application.
- Preparing this Report.

1.3 Submittals

Copies of the following DEP transmittal forms are in Appendix A, and the original forms were submitted with this report:

- Tier Classification Transmittal Form (BWSC107).
- NRS Scoresheet (BWSC107A).
- Initial Application for Tier I Permit (BWSC-03).

In accordance with Section 40.1403(3)(e) of the MCP, the offices of the Mayor and the Health Department for the city of Somerville have been notified of the availability of the Phase I Report and have been provided with a copy of the summary of findings and statement of conclusions from Section 10.0 of this Phase I Report. In accordance with Section 40.0703(8)(a) of the MCP, a public notice in the form of an advertisement was published in the *The Somerville Journal* on June 15, 2006. Prior to publishing the public notice, the offices of the Mayor and the Health Department were provided with a copy of the public notice and a copy of the disposal site map provided in this Phase I Report. Copies of the notification letters to the Mayor and Health Department and the public notice are in Appendix B.

1.4 Conceptual Site Model

The Property is approximately 51,111 square feet and developed with an approximately 20,594 square feet one-story masonry block building. The majority of the Property building is warehouse space and a small portion is office space. The building was constructed in two phases. The northern portion was constructed in about 1955 and was approximately 8,400 square feet. An approximately 12,200 square feet addition was constructed in 1977. From the mid-1950s through 2002, several different business entities distributed laundry and dry cleaning supplies at the Property.

Chlorinated volatile organic compounds (VOCs), particularly tetrachloroethylene (also called perchloroethylene [PCE]), have been measured in soil, groundwater, and indoor air at the Site. The source of the chlorinated VOCs is likely associated with the historic handling, storage, and distribution of laundry and dry cleaning chemicals at the Site. The highest concentrations of chlorinated solvents in groundwater were measured in samples collected from a well at the northwestern-corner of the building. The highest concentrations of chlorinated VOCs in soil were detected in samples collected from two borings advanced within the building foot print on the western side of the building on the Property. VOCs were measured in an indoor air sample collected in the Property building.

Chlorinated VOCs have been detected in groundwater samples collected from monitoring wells across Tufts Street from the Property. In 2005, DEP conducted indoor air testing for PCE and other VOCs in a number of homes located on Tufts Street. DEP sent a letter to each home owner summarizing the results of its testing and reported that the PCE detected during

the indoor air testing was below DEP's "threshold limit" for "significant risk of harm to health over a short period of time" and "below the levels DEP typically finds in homes."

Based on the impacted media, potential human receptors that could be exposed to Site contaminants include commercial workers, construction workers, utility workers, and residents of properties located downgradient from the Property.

Based on the concentration of contaminants in indoor air at the Property, the potential for an Imminent Hazard to a 40-hour per week commercial worker when evaluated over a period of five years was identified. The building was subsequently vacated, eliminating the pathway to the commercial worker and the potential for an Imminent Hazard. There is no pathway to a trespasser because, in general, the building is locked and portions of the Property that are not occupied by the building are paved.

2. General Disposal Site Information [310 CMR 40.0483(1)(a,b)]

In accordance with 310 CMR 40.0483(1)(a,b), the following general Site information is provided.

2.1 Property Location and Description

The Site is located along Tufts Street in Somerville, Massachusetts (Fig. 1), and includes the Property. The Universal Transverse Mercator (UTM) coordinates of the Property are 4,694,322 N and 328,049 E.

The Property is in a Commercial Residential zoning district. It is approximately 51,111 square feet and developed with an approximately 20,594 square feet one-story masonry block building (Fig. 2) (City of Somerville, 2006). The majority of the Property building is warehouse space, and a small portion is office space.

The eastern side of the building abuts the sidewalk and then Tufts Street, and on the western side of the building is a narrow strip of vegetation and then railroad tracks. Immediately north and south of the building is paved parking. Further south of the building is a grassed hill that slopes towards Washington Street. Access to the Property is restricted by a 6-foot-high chain-link fence.

2.2 Property Vicinity

The Property and Site are located in a residential and commercial neighborhood (Fig. 2). The Property is abutted by the following:

- Railroad tracks to the west.
- Tufts Street and then residences to the east.
- A parking garage and then residences to the north.
- Washington Street and commercial properties to the south.

The Michael E. Capuano Early Childhood Center is approximately 350 feet east of the Property.

2.3 Natural Resource Areas and Surrounding Land Use

Based on a review of the Massachusetts Geographic Information System (MassGIS) Natural Resources Map for the Boston South Quadrangle (Appendix C) dated February 28, 2006; a review of the Massachusetts Natural Heritage Atlas (11th edition); and a visit to the Site, the environmental setting and potential sensitive receptors of the Site and its vicinity include:

- Residential Population – Because the Site is an urban area, we have estimated greater than 1,000 residents live within 0.5-mile of the Site.
- On-Site Workers – There are currently no known on-site workers at the Property building. Residential properties within the Site are occupied.
- Institutions – The Michael E. Capuano Early Childhood Center is approximately 350 feet east of the Property.
- Drinking Water Supplies - There are no known drinking water supplies (Zone II areas, Interim Wellhead Protection Areas, Zone A areas, Potentially Productive Aquifers, or private wells) or Sole Source Aquifers within 500 feet of the Site.
- Surface Waters and Wetlands - There are no known wetlands, vernal pools, ponds, lakes, or reservoirs within 500 feet of the Site. The nearest surface water is the Mystic River, located approximately 0.9 mile northeast of the Site.
- Fish Habitat – There is no known fish habitat within 500 feet of the Site.
- Area of Critical Environmental Concern (ACEC) - According to the MassGIS map, the Site is not located in an ACEC.
- Threatened or Endangered Species - According to the MassGIS map, there are no Natural Heritage and Endangered Species Program Estimated Habitats for Rare Wetlands Wildlife within 500 feet of the Site. According to the Massachusetts Natural Heritage Atlas, there are no priority habitats of rare species, estimated habitats of rare wildlife, or certified vernal pools within 500 feet of the Site.
- Protected Open Space - According to the MassGIS map, the Site is not Protected Open Space. The Michael E. Capuano Early Childhood Center, located approximately 350 feet east of the Property, is incorrectly shown on the MassGIS map as a Protected Open Space. There are no known Protected Open Spaces within 500 feet of the Site.

2.4 Utilities

Based on a review of readily available subsurface utility plans, underground utilities at the Site include water, sewer, gas, electric, and fire alarm lines. The approximate locations of the known utilities are shown on Fig. 2.

A sewer line runs down the center of Tufts Street. A water line runs down Tufts Street on the west side of the sewer line. Gas and electric lines run down the northeastern side of Tufts Street. There are several service connections from the main sewer line to the Property. Gas service lines are only shown to the properties at 11-13, 17, and 27 Tufts Street. Electric service lines are shown only to the 11-13, 17, and 19 Tufts Street properties. Water line connections to two hydrants on the Property and one near the intersection of Knowlton and Tufts Streets are shown on the plans reviewed.

A plan of the Washington and Tufts Streets sewer lines obtained from the city of Somerville Department of Public Works (DPW) shows the vertical cross-section of the Tufts Street sewer line and indicates that the line drops from the northwest end of Tufts Street to the southeast end at the intersection with Washington Street.

2.5 Disposal Site Map

A Site Plan, including the locations of borings and monitoring wells and a preliminary inferred Site boundary is presented in Fig. 2.

3. Disposal Site History [310 CMR 40.0483(1)(c)]

In accordance with 310 CMR 40.0483(1)(c), the following is a summary of the owner/operator and operations history of the Property within the Site, release history, oil and/or hazardous material (OHM) use and storage history, waste management history, environmental permits and compliance history, and the potentially responsible parties.

3.1 Ownership and Operation History of the Property

The ownership and operations history of the Property is based on historic Sanborn fire insurance maps (Sanborn maps) obtained from Environmental Data Resources (EDR) for the years 1888, 1900, 1933, 1950, 1989, and 1991 (Appendix D); city of Somerville Atlases dated 1874 and 1884 (Appendix D); and public documents such as deeds and purchase agreements relative to the sale of the Property. A summary of Property ownership and operations is on Table 1.

From 1874 through at least 1900, residences were located on the Property. By 1933, most of residences on the Property had been razed, and by 1950 no structures were located on the Property.

According to available public records, on December 7, 1950, Superior Products Co., Inc., hereinafter called "Superior Products Co., Inc. (1950)" with a business address of 148 Pearl Street in Somerville, Massachusetts, was incorporated. The nature of the business was to manufacture, buy, sell, and deal in industrial chemicals, laundry supplies, and dry-cleaning supplies. According to an affidavit made by Mr. Frank Wahlen, his father Mr. Walter Wahlen, who was one of the incorporators of Superior Products Co., Inc. (1950), purchased the Property on December 6, 1954, and shortly thereafter, constructed an office building and warehouse. He then leased the building to Superior Products Co., Inc. (1950).

On September 30, 1976, 50 Tufts Street Co., Inc., (formerly Superior Products Co., Inc. (1950)), sold to Superior Products Co., Inc. (a newly formed corporation, hereinafter called Superior Products Co., Inc. (1976)) all it's properties and assets. It is not clear when, prior to this transaction, Superior Products Co., Inc. (1950) changed it's name to 50 Tufts Street Co., Inc.

On September 27, 1985, the John Danais Co., Inc. of Manchester, New Hampshire, purchased the assets, including inventory, of Superior Products Co., Inc. (1976). The Asset Purchase and Sale Agreement identifies UniFirst Corporation of Woburn, Massachusetts, as the parent company to Superior Products Co., Inc. (1976). The Asset Purchase and Sale

Agreement also indicate that the John Danais Co., Inc. would lease the building and land at the Property.

On March 30, 1987, John Danais of the John Danais Co., Inc. formed 50 Tufts Street, Inc., with a principal office at the Property. On May 21, 1987, 50 Tufts Street, Inc. purchased the Property from Superior Products Co., Inc. (1976). John Danais Co., Inc. continued to occupy the Property and operate as a distributor of laundry and dry cleaning supplies until approximately August 2002 when John Danais Co., Inc. ceased operations at the Property.

A Certificate of Use and/or Occupancy dated July 10, 1990, was issued by the city of Somerville Building Inspection Department for office and storage space use for a moving and storage company. Fire Department records indicate that in 1993 a furniture moving company occupied space in the warehouse. Some time prior to August 2002, Father & Son Moving and Storage (Father & Son) entered into a lease with 50 Tufts Street, Inc. to lease office space in the northern portion of the Property building, and parking space. At the time Father & Son entered into the lease, the John Danais Co., Inc. was still operating a laundry supply business in the southern portion of the Property building. On October 4, 2002, John Danais Co., Inc. filed for bankruptcy. By the end of December 2004, Father & Son vacated the Property building. The Property is currently vacant.

On May 10, 2005, Atlantic National Trust, LLC, holder of a mortgage on the Property, took title to the Property in the name of Somerville Two, LLC (Somerville Two). Somerville Two is the current owner of the Property.

3.2 Release History

There are three DEP RTNs assigned to the Site: 3-23246, 3-24358, and 3-24376.

3.2.1 Release Tracking Number 3-23246

In 2002, Mr. Francis Margaglione, a prospective purchaser of the Property, engaged Sanborn, Head & Associates (SHA) of Westford, Massachusetts, to conduct an environmental due diligence investigation (SHA, 2004a). SHA performed a subsurface exploration program including the collection of soil and groundwater samples for laboratory analyses. SHA measured PCE, trichloroethylene (TCE) and other chlorinated VOCs in soil and groundwater samples in concentrations greater than the applicable MCP reportable concentrations for soil category RCS1 and groundwater category RCGW2.

Mr. Margaglione provided the data to 50 Tufts Street, Inc., the Property owner at the time. On October 3, 2003, on behalf of 50 Tufts Street, Inc., Mr. Craig Campbell notified DEP of a release of PCE and other hazardous materials in excess of the applicable reportable

concentrations. DEP issued a Notice of Responsibility (NOR) to 50 Tufts Street, Inc. and assigned RTN 3-23246 to the release.

3.2.2 Release Tracking Number 3-24376

In August 2004, on behalf of Atlantic National Trust, LLC (the mortgagee of the Property), GeoInsight, Inc. (GeoInsight) of Westford, Massachusetts, installed four groundwater monitoring wells along the east side of Tufts Street, approximately 30 to 40 feet from the Site. PCE, TCE and 1,1,1-trichloroethane were detected in groundwater collected from each of the wells. In two of the wells located within 30 feet of residences, the concentrations of total VOCs were greater than 5 milligrams per liter (mg/l), triggering an MCP 72-hour reporting requirement.

On November 5, 2004, DEP issued an NOR to 50 Tufts Street, Inc. to conduct an Immediate Response Action (IRA) to evaluate the potential for a Critical Exposure Pathway (CEP) and/or a condition of Substantial Release Migration (SRM) due to the presence of VOCs in concentrations greater than 5 mg/l in the groundwater within 30 feet of occupied residences. DEP assigned RTN 3-24376 to the release.

3.2.3 Release Tracking Number 3-24358

On September 23, 2004, on behalf of Father & Son, a building tenant, SHA collected a sample of indoor air from the office portion of the Property building and submitted the sample for laboratory analysis of VOCs. PCE (929 parts-per-billion by volume [ppbv]), TCE (43.5 ppbv), and related chlorinated VOCs were detected at elevated concentrations in the air sample. Based on the air testing results, SHA concluded there was a potential for an Imminent Hazard to a 40-hours per week commercial worker when evaluated over a period of five years. SHA identified the John Danais Company as the owner of the Property.

On behalf of the building tenant, SHA reported the Imminent Hazard to DEP on October 22, 2004. DEP assigned RTN 3-24358 to the release. On November 16, 2004, DEP issued an NOR to the John Danais Company.

3.2.4 Historic Releases

A DEP Release Log Form Attachment (BWSC-102B) dated March 24, 2005, documents a discussion between Mr. Richard Papa, the owner and resident of 27 Tufts Street, and Ms. Irene Dale of DEP. Mr. Papa reportedly worked at Superior Products Co., Inc. (1976) from 1978 until 1980. According to Mr. Papa, a tank fill pipe used to fill a tank inside the building with PCE historically leaked. Mr. Papa also recalled a spill of approximately 50 to 60 gallons of PCE in 1979. The location of the spill was not identified. In a deposition taken on September 29, 2005, Mr. John Danais testified that the John Danais Company used the

same tank and the same tank fill pipe as Superior Products Co., Inc. (1976) had used. Mr. Danais also stated that the John Danais Company received, stored, and shipped out approximately 3,000 gallons of PCE per week, 52 weeks per year for 17 years.

3.3 Property Oil and/or Hazardous Material Use and Storage History

We obtained information from the Somerville Fire Department regarding underground storage tanks (UST) and above ground storage tanks (AST) at the Property. A summary of ASTs and USTs is in Table 2. Copies of records obtained from the Fire Department are in Appendix E. According to Fire Department records, materials stored and/or used at the Property included PCE, TCE, trichloroethane, assorted dry cleaning solvents, bleaching powder, oxidizers, corrosives, and diesel.

According to information obtained from a transcript of a deposition of Mr. John Danais, the John Danais Company stored dry cleaning and laundry supplies at the Property (Commonwealth of Massachusetts, 2005). Materials stored at the Property by the John Danais Company included PCE, detergents, alkalides, and bleaches. For a period of time, PCE was delivered to the Property via tanker trucks and offloaded to an AST at the southern end of the building. PCE was then redistributed to buyers by truck. Some time during the time the John Danais Company operated at the Property, deliveries of PCE by tanker truck ceased and PCE was delivered in 15 gallon drums. The other materials, detergents, alkalides, and bleaches, were delivered in drums, barrels or bags. According to Mr. Danais, materials were delivered to one of six truck bays at the south end of the Property building.

On November 18, 2004, GEI personnel visited the Property to observe current property conditions and inventory the materials, containers, drums, and ASTs in the building. A summary of the materials and containers observed by GEI on November 18, 2004, is in Table 3.

After taking title to the Property, Somerville Two arranged for the removal of the stored PCE, detergents, oily liquids and corrosives from the Site. They also arranged for the removal of the remaining ASTs. Materials were transported off-site between August 22, 2005, and October 7, 2005. A list of the materials removed and quantities are in Table 4. Copies of manifests and bills of lading are in Appendix F.

During a visit to the Property by GEI on December 7, 2005, we observed that most of the chemical containers (ASTs, drums, etc.) had been removed from the building since our November 2004 Property visit. However, several small chemical containers, and chemical piping and hoses were still observed in the building. Several brightly colored metal pipes were observed on the walls along the northern and northwestern end of the warehouse. Each

of the pipes was approximately 2 to 3 inches in diameter and ran along the walls. The ends of the pipes ran through the wall of the warehouse to the exterior of the building. These metal pipes were presumably used to move chemicals from bulk storage in the warehouse to the transport vehicle(s). These metal pipes were labeled "METHYLENE CHLORIDE," "PERCHLOROETHYLENE –SVC," "CHLOROTHENE-VC," and "NEU-TRI."

3.4 Waste Management History

According to information obtained from an EDR report generated for the Property, Superior Products and Equipment, Co. was a Resource Conservation and Recovery Act (RCRA) Small Quantity Generator. Superior Products and Equipment, Co. was cited with a RCRA violation on November 2, 1984. The EDR report identifies the area of violation as "Generator-All Requirements (Oversight)." Compliance was reportedly achieved on April 3, 1985. There are no other known records or reports of historical waste management at the Property.

3.5 Environmental Permits and Compliance History

We obtained information from the city of Somerville Fire Department regarding permits for flammable materials storage at the Property. Yearly maintenance permits were issued for a 14,000 gallon PCE AST; two 5,000 gallon ASTs; the above ground storage of assorted dry cleaning solvents and bleaching powder; five 33-pound propane tanks; and a warehouse containing 55-gallon drums of oxidizers and corrosives.

A permit was issued by the Fire Department on September 1, 2005, for the removal of the 14,000 gallon AST. The date of removal was not identified. Fire Department records also indicate the removal of a 5,000-gallon diesel UST on August 19, 1987; and the removal of four ASTs (10,000-gallon; 1,500-gallon; and two 2,500-gallon) on November 30, 1990. The contents of the ASTs were not specified.

3.6 Potentially Responsible Parties

In an NOR dated October 29, 2003, issued to 50 Tufts Street, Inc., DEP identified 50 Tufts Street, Inc. as a PRP. This NOR was issued in response to a Release Notification Form (RNF) submitted to DEP on behalf of 50 Tufts Street, Inc. for the presence of chlorinated VOCs in soil and groundwater at the Property in concentrations above the applicable reportable concentrations. DEP issued an NOR; Notice of Need to Conduct IRA; Designation of Interim Deadlines dated November 5, 2004, to 50 Tufts Street, Inc. due to the concentrations of chlorinated VOCs detected in groundwater less than 15 feet below ground surface and within 30 feet of an occupied residential structure. 50 Tufts Street, Inc. owned the Property at the time. 50 Tufts Street filed with the DEP for Financial Inability Status; however, the DEP deemed the application incomplete.

In an NOR dated November 16, 2004, issued to the John Danais Company, DEP identified the John Danais Company as a PRP. The NOR was issued in response to the oral notification of the presence of chlorinated VOCs in indoor air at the Property.

On June 9, 2005, DEP issued a Notice of Need to Conduct IRA to Somerville Two. DEP identified that Somerville Two, as a single entity trust, had foreclosed on the Property and was an Other Party.

In an NOR dated November 9, 2005, issued to UniFirst by the DEP, DEP identified UniFirst as a PRP.

4. Site Hydrogeology Characteristics [310 CMR 40.0483(1)(d)]

In accordance with 310 CMR 40.0483(1)(d), the following is a summary of geologic, hydrologic, and other subsurface investigations, general site topography, geologic and stratigraphic conditions, groundwater flow direction. The below information is based on a review of reports of investigations conducted by others.

4.1 Previous Subsurface Investigations

4.1.1 Subsurface Investigations by Sanborn Head & Associates (2002)

In 2002, Mr. Francis Margaglione, a prospective purchaser of the Property, engaged SHA to conduct an environmental due diligence investigation on the property (SHA, 2004a). SHA performed a subsurface exploration program consisting of the advancement of ten soil borings (SH-1 through SH-5, SH-B1, SH-B2, and SH-MW1 through SH-MW3), the installation of eight monitoring wells (SH-1 through SH-5, and SH-MW1 through SH-MW3), and the collection of soil and groundwater samples for laboratory analyses. The locations of the borings and monitoring wells are shown on Fig. 2. Boring and monitoring well logs prepared by SHA are in Appendix G. A summary of boring and monitoring well information is in Table 5.

Soil samples were submitted to Alpha Analytical Laboratories (Alpha Labs) of Westborough, Massachusetts, for chemical analysis. Five samples (from SH-1 through SH-4 and SH-B1) were tested for VOCs, extractable petroleum hydrocarbon (EPH) fractions, and volatile petroleum hydrocarbon (VPH) fractions; one sample (from SH-5) was tested for VOCs and EPH fractions; and three of the samples (from SH-MW1 through SH-MW3) were tested for VOCs only.

The borings were terminated in the overburden at depths ranging from 12 to 25 feet, except for SH-MW1, which was advanced into bedrock and was terminated at a depth of 30 feet. The monitoring well installed in SH-MW1 was screened in both the overburden and the bedrock from 10 to 30 feet below ground surface.

At the time SHA performed the investigation, they observed three existing wells on the Property (MW-1 through MW-3; Fig. 2). SHA and Mr. Margaglione did not determine when or by whom these wells were installed on the Property. Therefore, boring and monitoring

SHA encountered auger refusal at a depth of 13 feet in SH-MW1. SHA cored rock at depths from 13 to 30 feet. Although SHA did not identify the type of bedrock, according to the Bedrock Geologic Map of Massachusetts, dated 1983, the bedrock in the vicinity of the Property is Cambridge argillite, which is gray argillite and minor quartzite.

4.4 Hydrogeologic Setting

Regional groundwater in the vicinity of the Site is expected to flow northeast toward the Mystic River; however, based on groundwater elevation measurements collected by GeoInsight on August 16, 2004, Site overburden groundwater flow is toward the southeast.

Depth to groundwater at the Site on August 16, 2004 ranged from approximately 8.5 feet to 13 feet (GeoInsight, 2004). Groundwater elevation contours generated based on the measurements collected by GeoInsight on August 16, 2004, are shown on Fig. 3.

5. Evaluation for Immediate Response Actions [310 CMR 40.0483(1)(g)]

5.1 Imminent Hazard Evaluation

According to the DEP Guidance for Disposal Site Risk Characterization, July 1995, an imminent hazard evaluation is "site-specific in nature and focuses on actual or likely exposures under current site conditions, given the current site uses(s) and site activities…" The imminent hazard evaluation is very narrow in scope and it only considers actual, current exposures, given current site use(s) and not foreseeable future uses(s) and exposures.

5.1.1 Historic Imminent Hazard Evaluation (RTN 3-24358)

On September 21, 2004, on behalf of Father & Son, the building tenant, SHA collected a sample of indoor air from the office portion of the building on the Property and submitted the sample to Alpha Labs for laboratory analysis of VOCs by EPA Method TO15. PCE (929ppbv), TCE (43.5 ppbv) and related chlorinated VOCs were detected in the air sample. A summary of the data is on Table 6, and the laboratory data sheets are in Appendix H.

At the time sampling was conducted, substantial quantities of chemicals were stored in the building in drums, tanks, and other containers. Based on the air testing results, SHA concluded there was a potential for an Imminent Hazard to a 40-hours per week commercial worker when evaluated over a period of five years.

On behalf of the building tenant, SHA reported to DEP on October 22, 2004, that it had concluded there was a potential Imminent Hazard. DEP assigned RTN 3-24358 to the release and approved an IRA to increase the ventilation in the office space and vacate the space as soon as an alternative location could be arranged. The ventilation in the office area was improved and tenants vacated the building on December 31, 2004. SHA submitted an IRA Completion Report on February 2, 2005.

5.1.2 Current Imminent Hazard Evaluation

In a letter dated November 9, 2005, DEP directed UniFirst to obtain the opinion of a Licensed Site Professional (LSP) stating whether an Imminent Hazard exists at the Property.

The Property is currently vacant. Ms. Ileen Gladstone, P.E., LSP, and Mr. Mark Ensign of GEI visited the Property on December 7, 2005, and observed the interior of the building. No indication of current occupants in the Property building was observed.

In a letter dated January 9, 2005, Ms. Gladstone opined that "currently there are no occupants of the building and no human receptors. Therefore, based on the current Property use, an Imminent Hazard does not exist at 50 Tufts Street."

5.2 50 Tufts Street, Inc (RTN 3-24376)

On December 21, 2004, DEP issued a Notice of Response Action; Interim Deadline (NRA) to 50 Tufts Street, Inc. to evaluate indoor air at six residences across Tufts Street and evaluate utility lines within Tufts Street for the presence of Site contaminants that may pose a condition of SRM. If IRA actions were not initiated by January 11, 2005, the DEP gave notice that it would assign a contractor to carry out response actions. 50 Tufts Street, Inc. did not undertake the required response actions.

DEP conducted an indoor air screening program at residences located at 9, 11-13, 19, 25, and 27 Tufts Street. DEP contacted residents and obtained access agreements. On February 9, 2005, DEP conducted indoor air screening for chlorinated VOCs in the basement and first floor of each residence. DEP collected indoor air samples into Tedlar bags and analyzed the samples at the DEP Northeast Regional Office (NERO) with a NERO screening method utilizing gas chromatography. The only analyte detected was PCE at a concentration of 0.26 ppbv in the sample collected from the basement of 19 Tufts Street. Copies of the DEP home inventory logs and screening results are in Appendix H.

In February and March 2005, DEP coordinated the sampling of indoor air for laboratory testing at the residences located at 9, 11-13, 17, 19, 23, 25, and 27 Tufts Street. Shaw Environmental & Infrastructure (Shaw) of Andover, Massachusetts, collected the samples. A four-hour time weighted average sample was collected from the basement and the first floor of each residence into Summa canisters. Accutest Laboratories, Inc., of Marlborough, Massachusetts (Accutest), analyzed the samples for VOCs by EPA Method TO-15. PCE was detected in the basement and first floor air samples from 9, 11-13, 17, 19, and 23 Tufts Street. PCE was also detected in the basement sample from 25 Tufts Street. PCE was not detected in the first floor sample from 25 Tufts Street, or in the basements or first floor samples from 27 Tufts Street. PCE concentrations ranged from 0.14 ppbv to 1.3 ppbv, with the highest concentration detected in a sample collected at 17 Tufts Street. The indoor air testing data is summarized on Table 7 and the laboratory data reports are in Appendix H. Minimum and maximum detected indoor air concentrations are summarized on Table 8.

5.3 Somerville Two, LLC (RTN 3-24376)

Somerville Two is the current owner of the Property. On June 9, 2005, DEP issued a Notice of Need to Conduct IRA to Somerville Two. DEP had determined that based on the indoor

air sampling results, a condition of SRM existed at the Site and that Somerville Two needed to conduct response actions necessary to abate the SRM. DEP required Somerville Two to repair and seal the basement floor of 17 Tufts Street and eliminate pathways through openings in the walls.

Somerville Two responded that the indoor air testing results did not represent a condition of SRM, since the results were less than DEP published background concentrations for PCE in residences. DEP responded that, although concentrations were below published background concentrations, the concentrations of PCE measured in 17 and 19 Tufts Street relative to those in the other nearby residences nonetheless constituted an SRM. DEP therefore directed Somerville Two to undertake an IRA.

On September 8, 2005, GeoInsight submitted an IRA Plan (a letter RE: 17 Tufts Street Floor Repair dated September 6, 2005) to DEP to repair and seal the basement floor and portions of the wall at 17 Tufts Street. During September 2005, GeoInsight repaired damaged areas of the concrete floor and wood paneling at 17 Tufts Street. A concrete latex-based sealer was applied to newly repaired sections of floor and those portions of the floor that were not recently painted by the owner.

On October 11, 2005, GeoInsight submitted an IRA Plan and Completion Statement dated October 7, 2005, to DEP. The Completion Statement concluded that response actions were completed since the potential CEPs (broken concrete floor, utility manways and foundation cracks) were sealed. The Completion Report also reiterated that the concentrations of chlorinated VOCs from 17 Tufts Street were below published DEP background concentrations.

On October 20, 2005, DEP issued a Notice of Immediate Response Action Completion (IRAC) Statement Denial; Notice of Need to Conduct IRA; and Designation of Interim Deadline to Somerville Two. DEP did not consider the IRA complete since the entire basement floor at 17 Tufts Street was not sealed and there was no monitoring plan for collecting additional indoor air samples or groundwater samples. DEP required additional response actions of Somerville Two including technical justification for the continued use of DEP published background data or removal of its reference from the Report, sealing the remainder of the basement floor at 17 Tufts Street, a groundwater monitoring program for the wells along Tufts Street, and an indoor air sampling program for the residences at 17 and 19 Tufts Street.

GeoInsight submitted an IRA Plan Addendum to DEP dated November 29, 2005. The Plan indicated that the basement of 17 Tufts Street would be painted by 2 coats of latex-based paint. Two coats were applied by GeoInsight to the rear (eastern) portion of the basement. The owner was applying two coats of latex-based paint in the front portion of the basement.

The IRA Plan Addendum included an indoor air monitoring program to be conducted at 17 and 19 Tufts Street in February 2006.

5.4 UniFirst (RTNs 3-23246, 3-24358, and 3-24376)

On November 9, 2005, DEP issued a Notice of Responsibility, Notice of Need to Conduct IRA, and Designation of Interim Deadlines (Notice) to UniFirst to conduct an Imminent Hazard Evaluation (IHE) at the Property, to establish a monitoring plan for seven Tufts Street residences, and to evaluate potential impacts to other receptors.

GEI prepared an Imminent Hazard Evaluation (IHE) dated January 9, 2006, to evaluate conditions associated with a release of chlorinated VOCs at the Property. The conclusions of the IHE were that because there are no occupants of the building and no human receptors, an Imminent Hazard does not exist at the Property.

GEI prepared an IRA Plan dated January 9, 2006, to address the remaining items identified by DEP. The IRA activities include:

- Quarterly indoor air monitoring at 17 and 19 Tufts Street for one year.
- Semi-annual indoor air monitoring at 9, 11/13, 23, 25, and 27 Tufts Street for one year.
- Evaluation of underground utility lines as a potential migration pathway.
- The advancement of soil borings, installation of monitoring wells, and the collection of soil and groundwater samples.
- An evaluation of groundwater flow direction.

IRA activities were initiated in January 2006. IRA activities conducted between January 9, 2006, and April 10, 2006, were summarized in IRA Status Report No. 1, dated May 9, 2006, and included:

- Evaluating whether an Imminent Hazard exists at the Property – An LSP opinion concluding that the Property is currently not occupied and that based on the current use, an Imminent Hazard does not exist, was submitted to DEP on January 9, 2006.
- Conducting indoor air sampling at the residences along Tufts Street – GEI met with the residents from the neighborhood and with representatives of the city of Somerville. Following the meeting we conducted indoor air sampling. The results of the indoor air testing had not been validated at the time the IRA Status Report No. 1 was submitted to DEP.

- Evaluating the shallow groundwater plume in the vicinity of the Property – we prepared and submitted permit applications to install groundwater monitoring wells in the street. The monitoring wells are scheduled to be installed in April 2006.

6. Nature and Extent of Contamination [310 CMR 40.0483(1)(e)]

6.1 Nature of Contamination

6.1.1 Soil

The nature of soil contamination at the Site consists of VOCs including chlorinated VOCs, and petroleum-related compounds. The following contaminants were detected in at least one soil sample:

- VOCs: 2-butanone (methyl ethyl ketone), 4-methyl-2-pentanone, PCE, toluene, TCE, and 1,1,1-trichloroethane.
- VPH: C_5-C_8 aliphatics.
- EPH: C_{19}-C_{36} aliphatics and C_{11}-C_{22} aromatics.

A summary of soil chemical data is in Table 9. Laboratory data reports for soil samples collected by SHA in 2002 and GeoInsight in 2004 are in Appendix I. The minimum and maximum concentrations detected in soil samples are in Table 10. The concentrations of PCE, 2-butanone, TCE, C_5-C_8 aliphatics, and C_{11}-C_{22} aromatics in at least one sample exceeded MCP RCS1.

6.1.2 Groundwater

The nature of groundwater contamination at the Site consists primarily of chlorinated VOCs. Groundwater samples were not tested for EPH or VPH compounds. The following contaminants were detected in at least one groundwater sample at the Site:

- VOCs: acetone;1,1-dichloroethane; 1,1-dichloroethene; cis-1,2-dichloroethene; methyl tert butyl ether (MTBE); PCE; 1,1,1-trichloroethane; and TCE.

A summary of groundwater chemical data is in Table 11. Laboratory data reports for groundwater samples collected by SHA and GeoInsight are in Appendix I. The minimum and maximum concentrations detected in groundwater samples are in Table 12.

Concentrations of PCE; 1,1,1-trichloroethane; 1,1-dichloroethane; and TCE in several samples exceeded RCGW2 standards.

6.2 Extent of Contamination

6.2.1 Soil Contamination

The primary contaminant in soil at the Site is PCE. PCE has been measured in soil samples collected throughout the Property. In the northern portion of the Property, outside the building, PCE was measured in soil sample GEO-1 (2 to 4 feet) at 2.45 milligrams per kilogram (mg/kg) and in GEO-1 (6 to 8 feet) at 8.07 mg/kg. Towards the southern portion of the Property, approximately 100 feet from the building, PCE was measured in soil sample SH-MW2 (15 to 17feet) at 23 mg/kg.

Concentrations of contaminants in soil were highest in samples collected from beneath the footprint of the building. PCE was measured in soil sample SH-1 (12 to 14 feet) at 1500 mg/kg and SH-2 (4 to 5 feet) at1800 mg/kg. Both locations are within the Property building footprint.

Soil samples were not collected off the property for laboratory analysis.

6.2.2 Groundwater Contamination

The primary VOCs measured in groundwater are PCE, TCE and 1,1,1-trichloroethane. VOCs have been measured in groundwater samples collected throughout the Property and in wells across Tufts Street. In the northern portion of the Property, outside the building, PCE, TCE and 1,1,1-trichloroethane were measured in MW-1 at 52,000 micrograms per liter (ug/l), 290,000 ug/l and 220,000 ug/l, respectively. The well construction log for MW-1 is not available, therefore the well screen interval is not known. GEO-1 is located approximately 20 feet north of MW-1. In a groundwater sample collected from GEO-1 at a depth of between 5 and 20 feet. PCE, TCE and 1,1,1-trichloroethane were measured at 1880 ug/l, 898 ug/l and 1720 ug/l, respectively.

Groundwater samples were collected from wells installed within the footprint of the building. SH-3 is located approximately midway within the building footprint along the eastern edge; PCE was measured at 19,500 ug/l from a depth of 8 to 13 feet. SH-2 is located approximately midway within the building footprint along the western edge; however no water has been measured in this well. SH-1 is located within the southern portion of the building footprint along the western edge; PCE was measured at 49,700 ug/l in a groundwater sample collected from a depth of 9 to 14 feet.

Immediately south of the building PCE was measured at 16,200 ug/l in a groundwater sample collected from MW-3 (the depth of the sample is unknown). PCE was measured

approximately 100 feet south of the building in SH-MW-2 and SH-MW-3. PCE was measured at 7170 ug/l in SH-MW-2 collected at a depth of 10 to 25 feet. PCE was measured at 26,000 ug/l at a depth of 10 to 24 feet. This well is screened across the overburden and bedrock interface.

Four groundwater monitoring wells are located across Tufts Street, in front of residences. PCE was detected in these wells ranging from 782 ug/l in the southern most well (GEO-6) to 14,400 ug/l in well GEO-5. These samples were collected at a depth of 5 to 20 feet.

6.3 Source of Contamination

The source of the chlorinated solvents detected at the Site is believed to be releases associated with the historic handling, storage, and distribution of laundry and dry cleaning chemicals at the Site.

7. Migration Pathways and Exposure Potential [310 CMR 40.0483(1)(f)]

7.1 Migration Pathways

The characteristics affecting fate and transport of organic contaminants include specific gravity, vapor pressure, solubility, partitioning coefficients, and biodegradability. The dominant fate and transport processes for VOCs, VPH, and EPH, include diffusion, groundwater flow, adsorption to soil particles, volatilization to the soil vapor, and biodegradation.

VOCs and VPH compounds tend to be relatively soluble in groundwater, and have been shown to biodegrade substantially in groundwater. Significant concentrations of VOCs, particularly chlorinated VOCs, were detected in groundwater at the Site. Therefore, groundwater flow and diffusion are considered a significant potential means of contaminant transport for this Site. The potential for migration of VOCs in groundwater, from groundwater to soil, and from soil to indoor air exists at the Site.

EPH compounds generally exhibit low vapor pressures, low solubilities, and high octanol/water partitioning coefficients (K_{ow}). These characteristics indicate that they are less likely to volatilize into the soil vapor or solubilize into the groundwater. These compounds exhibit strong binding characteristics resulting in relative immobility in soils. A high K_{ow} value also precludes substantial influx into plants from soil-bound EPH compounds. EPHs detected in soil are therefore unlikely to significantly migrate from soil to groundwater or indoor air.

Underground utilities may provide a preferential pathway for contaminants in groundwater. There are several underground utilities at the Site. These utilities will be evaluated during IRA and Phase II activities as potential contaminant migration pathways.

7.2 Exposure Potential

The exposure potential posed by contaminants in soil at the Property includes dermal contact, incidental ingestion, and inhalation by utility workers and construction workers. Portions of the Property that are not occupied by the Property building are paved; therefore, trespassers and commercial workers are not currently potential receptors to contaminants in soil. The source of contamination in soil is believed to be historic releases of laundry and dry cleaning chemicals on the Property. Residents of properties on Tufts Street may be exposed to

contaminants in soil on residential properties; however, contaminant concentrations in soil on the residential properties are not expected to be significant.

The exposure potential posed by contaminants in groundwater includes dermal contact and ingestion of groundwater by utility workers. There are no private drinking water wells within 500 feet of the Site, and the Site is not located within a Zone II or potentially productive aquifer. The nearest surface water body to the Site is the Mystic River, located approximately 0.9 mile northeast of the Site. Site contaminants are not expected to be identified in surface water because Site contaminants in groundwater consist of VOCs, the nearest surface water body is greater than 500 feet northeast of the Site, and Site groundwater is expected to flow to the southeast.

A current site worker would be exposed to contaminants present in indoor air; however, the property is vacant, eliminating the exposure pathway to the current site worker. Residents of properties located downgradient of the Site do have the potential for exposure to contaminants in indoor air. These potential indoor air exposures to residents are being evaluated under the IRA Plan submitted to DEP on January 9, 2006.

8. Numerical Ranking System Scoresheet

GEI completed an NRS Scoresheet for the Site based on the information contained in this Phase I Report (Appendix A). The NRS score was 402. Therefore, the Site is classified as Tier IC.

9. Conceptual Phase II Scope of Work

In accordance with the MCP 310 CMR 40.0510(1), a Conceptual Scope of Work for a Phase II CSA is required in a Phase I Report and Tier Classification. The Phase II work will incorporate ongoing IRA activities at the Site including periodic indoor air monitoring at residential properties on Tufts Street and an evaluation of underground utility lines as a potential migration pathway. As part of Phase II, additional borings will be advanced and monitoring wells installed to further evaluate the nature and extent of contamination at the Site. Some of the borings and monitoring wells will be advanced into bedrock to evaluate the vertical extent of contamination.

10. Findings and Conclusions [310 CMR 40.0483(1)(h)]

Based on the information presented in this Phase I Report:

- The Property was used for the handling, storage, and distribution of laundry and dry cleaning chemicals from approximately 1955 through 2002.
- PCE was stored at the Property.
- Three RTNs have been assigned to the Site due to the presence of VOCs, including PCE and other chlorinated VOCs, in soil and groundwater at concentrations above RCS1 and RCGW2, respectively, and the presence of VOCs in indoor air in the Property building and residences along Tufts Street. VPH and EPH fractions have also been detected in soil on the Property.
- 50 Tufts Street Co., Inc., John Danais Company, and UniFirst have been identified by DEP as PRPs. 50 Tufts Street, Co., Inc. filed for Financial Inability Status with the DEP; however, their application was incomplete. The current owner of the Property, Somerville Two, has been identified by DEP as an Other Party.
- Potential human receptors that may be exposed to Site contaminants include utility and construction workers and current residents of properties along Tufts Street and downgradient from the Property.
- Additional assessment will include ongoing periodic indoor air monitoring at residential properties on Tufts Street; evaluation of underground utility lines as a potential migration pathway; and subsurface investigation to evaluate the extent of contamination.
- The Site is classified Tier I C, based on an NRS score of 402.

11. Limitations

This report was prepared for the use of UniFirst Corporation, exclusively. The conclusions presented in this report are based solely on the information reported in this document. Additional quantitative information regarding the property and the Site not available to us may result in a modification of the findings herein. The submittal has been prepared in accordance with generally accepted geohydrological practices. No warranty, expressed or implied, is made.

References

City of Somerville, 2006. Official City of Somerville website, Assessor's Database for 50 Tufts Street (http://data.visionappraisal.com/somervillema/), accessed on February 28, 2006.

Commonwealth of Massachusetts, 2005. Transcript of the deposition of John Danais on September 29, 2005.

GeoInsight, 2004. Data Package "Re: Field Data and Laboratory Reports, 50 Tufts Street, Somerville, Massachusetts, RTN 3-23246," from GeoInsight, Inc. to Stephen M. Johnson, MADEP, dated September 24, 2004.

GeoInsight, 2005. Immediate Response Action Plan and Completion Report, 50 Tufts Street Site, Possible Substantial Release Migration Conditions at 17 Tufts Street and Associated Mitigation of Critical Exposure Pathway, Somerville, Massachusetts, RTN 3-24376, dated October 7, 2005.

SHA, 2004a. Letter "RE: Request for Information dated May 25, 2004, 50 Tufts Street, Somerville, RTN 3-23246" from Duncan W. Wood of Sanborn Head & Associates to the Department of Environmental Protection, dated June 17, 2004.

SHA, 2004b. Letter RE: "Indoor Air Sample from Office Area, 50 Tufts Street, Somerville, Massachusetts," from Sanborn Head & Associates to Mr. Francis Margaglione dated November 10, 2004.

SHA, 2005. Submission of IRA Completion Statement and LSP Opinion for RTN 3-24358, 50 Tufts Street, Somerville, Massachusetts, by Sanborn, Head & Associates, dated February 2, 2005.

Shaw, 2005. Electronic Mail Subject "FW: LabLink report N91584: MADEP, Tufts Road, Somerville, Massachusetts," from James Collins (Shaw Group) to Irene Dale (DEP) dated March 1, 2005.

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

Table 1
Property Ownership and Use
50 Tufts Street
Somerville, Massachusetts

Approximate Dates	Property Owner	Tenant	General Operations
5/10/2005 - Present	Somerville Two, LLC	Vacant	None
12/31/2004 – 5/10/2005	50 Tufts St., Inc.	Vacant	None
2002 – 12/31/2004	50 Tufts St., Inc.	Father & Son Moving and Storage	Office space and storage
5/21/1987 – 8/2002	50 Tufts St., Inc.	Father & Son Moving and Storage[a] and John Danais Co., Inc.	Office space, storage, laundry supply[b]
9/27/1985 - 5/21/1987	Superior Products Co., Inc. (1976)	John Danais Co., Inc.	Laundry supply
9/30/1976 – 9/27/1985	Superior Products Co., Inc. (1976)	Superior Products Co., Inc. (1976)	Laundry supply
12/6/54 – 9/30/1976	Walter Wahlen, then Boston Safe Deposit & Trust Co., Inc. and Frank E. Wahlen[c]	Superior Products Co., Inc. (1950)	Laundry supply

General Notes:

1. Sources of the above information include historic Sanborn fire insurance maps; city of Somerville Atlases; and public documents such as municipal records, deeds, and purchase agreements relative to the sale of the Property.
2. Superior Products Co., Inc. (1950) refers to the company named Superior Products Co., Inc. that was incorporated in 1950.
3. Superior Products Co., Inc. (1976) refers to the company named Superior Products Co., Inc. that was incorporated in 1976.

Footnotes:

a. A Certificate of Use and/or Occupancy was issued by the city of Somerville Building Inspection Department on July 10, 1990, for office and storage space use for a moving company.
b. Father & Son Moving and Storage used a portion of the building as office space. John Danais Co., Inc. operated a laundry supply business.
c. Walter Wahlen purchased the Property in 1954. Boston Safe Deposit & Trust Co., Inc. and Frank E. Wahlen, co-executors of Walter Wahlen's will, sold the Property in 1976.

Table 2
Summary of Aboveground and Underground Storage Tanks
50 Tufts Street
Somerville, Massachusetts

Tank Type	Tank Capacity (gallons)	Product	Date Installed	Date Removed	Reference
UST	5,000	Diesel Fuel	1979	8/19/1987	(a)
AST	14,000	Perchloroethylene (PCE)	Unknown	Unknown	(a), (b)
AST	5,000	Assorted Dry Cleaning Solvents	Unknown	Unknown	(a)
AST	5,000	Assorted Dry Cleaning Solvents	Unknown	Unknown	(a)
AST	10,000	Unknown	Unknown	11/30/1990	(a)
AST	1,500	Unknown	Unknown	11/30/1990	(a)
AST	2,500	Unknown	Unknown	11/30/1990	(a)
AST	2,500	Unknown	Unknown	11/30/1990	(a)
AST	1,300	Unknown	Unknown	Unknown	(b)
AST	1,300	Unknown	Unknown	Unknown	(b)
AST	< 300	Unknown	Unknown	Unknown	(b)
AST	< 300	Unknown	Unknown	Unknown	(b)

Notes:

1. Tank capacities shown were either reported on documents obtained from the city of Somerville Fire Department or are based on visual estimates made during the GEI property visit on November 18, 2004.
2. AST = Aboveground storage tank.
3. UST = Underground storage tank.
4. The 14,000 PCE AST was identified on Fire Department records as either a 14,000 or 15,000-gallon AST. Fire Department personnel clarified via telephone that the AST was a 14,000-gallon AST.

References:

(a) City of Somerville Fire Department records.
(b) Observations made during Property visit by GEI personnel on November 18, 2004.

Table 3

Summary of Material Inventory Observed on November 18, 2004

50 Tufts Street
Somerville, Massachusetts

Material Type	Estimated Container Size	Approximate Quantity of Containers
Sodium Hypochlorite/Bleach	5 gallons	7 pails
Sodium Hypochlorite	30-55 gallons	8 drums
Unspecified Oxidizers	Lab packs(a)	Unspecified(b)
Unspecified Acids and Alkaline (Liquids)	5 gallons	28 pails
Unspecified Acids and Alkaline (Liquids)	30 gallons	32 drums
Unspecified Acids and Alkaline (Liquids)	55 gallons	4 drums
Unspecified Acids and Alkaline (Liquids)	Lab packs(a)	Unspecified(c)
Sodium Hydroxide	55 gallons	5 drums
Non-hazardous Solids (starch, road salt)	55 gallons	3 drums
Petroleum Oil	55 gallons	3 drums
Perchloroethylene	55 gallons	7 drums
Unmarked	55 gallons	6 drums
Empty	5 gallons	240 pails
Empty	30 gallons	303 drums
Empty	20 gallons	51 drums
Empty	55 gallons	22 drums
Empty	55 gallons	6 drums
Unspecified	<300 gallons	2 ASTs
Unspecified	20,000 gallons	1 AST
Unspecified	1300 gallons	2 ASTs

General Notes:

1. Container sizes and quantities are estimated and are based on GEI's observations made on November 18, 2004.
2. AST = Aboveground storage tank.

Footnotes:

(a) The sizes of the lab packs were not specified.
(b) Based on visual observations, the quantity of oxidizer lab packs was estimated to fill a single 55-gallon drum.
(c) Based on visual observations, the quantity of oxidizer lab packs was estimated to fill four 55-gallon drums.

Table 4
Summary of Materials and Containers Removed August - October 2005
50 Tufts Street
Somerville, Massachusetts

Material Type	No. of Containers	Total Quantity	Date Transported
Non-DOT non-regulated materials	31	585 gal	08/22/05
Non-DOT non-regulated materials (RCRA empty drums)	16	--	08/22/05
Non-DOT non-regulated materials (RCRA empty drums)	5	--	08/22/05
MA State regulated oily liquids	9	455 gal	08/31/05
Waste - Tetrachlorethene	13	715 gal	08/31/05
Waste - Tetrachlorethene solids	2	300 lbs	08/31/05
Waste sodium hypochlorite solution	5	275 gal	08/31/05
Waste Tetrachlorethene	1	55 gal	08/31/05
Potassium hydroxide solution	1	15 gal	08/31/05
Waste - Corrosive liquid, acidic, organic	2	10 gal	08/31/05
Non-DOT or EPA regulated	1	55 gal	08/31/05
Non-DOT or EPA regulated detergent	1	55 gal	08/31/05
Waste sodium hydroxide solution	2	140 gal	09/01/05
Waste sodium hydroxide solution	4	120 gal	09/01/05
Waste sodium hydroxide solution	1	85 gal	09/01/05
Waste hypochlorite solution	6	90 gal	09/01/05
Waste - Print related material	1	5 gal	09/01/05
Waste - Corrosive liquid basic inorganic	1	30 gal	09/01/05
Waste - Toxic liquid, organic	1	70 lbs	10/07/05
Non-hazardous, non-regulated solids	3	1000 lbs	10/07/05
MA State regulated oily liquid	2	65 gal	10/07/05
Non-hazardous, non-regulated liquids	1	5 gal	10/07/05

Notes

1. Information obtained from waste manfests provided by Somerville Two, LLC.
2. DOT - Department of Transportation.
3. RCRA = Resource Conservation and Recovery Act.
4. EPA = Environmental Protection Agency.
5. gal = gallons.
6. lbs = pounds.

Table 5

Soil Boring and Monitoring Well Summary

50 Tufts Street

Somerville, Massachusetts

Location Name	Location Type	Installed By	Completion Date	Method	Well Screen Interval (ft)	Screened Strata	Total Depth (ft)	Comment
GEO-1	Monitoring Well	GeoInsight	8/12/04	HSA	5 - 20	Sand	20	
GEO-2	Monitoring Well	GeoInsight	8/12/04	HSA	5 - 20	Sand	20	
GEO-3	Monitoring Well	GeoInsight	8/13/04	HSA	5 - 20	Sand	20	
GEO-4	Monitoring Well	GeoInsight	8/13/04	HSA	4 - 19	Sand	19	
GEO-5	Monitoring Well	GeoInsight	8/16/04	HSA	5 - 20	Sand, Silt and Clay	20	
GEO-6	Monitoring Well	GeoInsight	8/13/04	HSA	5 - 20	Sand	20	
GEO-7	Soil Boring Only	GeoInsight	8/16/04	HSA	NA	NA	13	
MW-1	Monitoring Well	unknown	unknown	unknown	unknown	unknown	unknown	Boring/well log not provided
MW-2	Monitoring Well	unknown	unknown	unknown	unknown	unknown	unknown	Boring/well log not provided
MW-3	Monitoring Well	unknown	unknown	unknown	unknown	unknown	unknown	Boring/well log not provided
SH-1	Monitoring Well	SHA	6/21/02	Geoprobe	9 - 14	Sand	14	
SH-2	Monitoring Well	SHA	6/21/02	Geoprobe	7 - 14	Sand	14	
SH-3	Monitoring Well	SHA	6/21/02	Geoprobe	8 - 13	Sand	13	
SH-4	Monitoring Well	SHA	6/21/02	Geoprobe	11 - 16	Sand	16	
SH-5	Monitoring Well	SHA	6/21/02	Geoprobe	8 - 13	Sand and Gravel	13	
SH-B1	Soil Boring Only	SHA	6/21/02	Geoprobe	NA	NA	15	
SH-B2	Soil Boring Only	SHA	6/21/02	Geoprobe	NA	NA	12	
SH-MW1	Monitoring Well	SHA	7/3/02	HSA/Rock core	10 - 30	Silt, Clay and Bedrock	30	
SH-MW2	Monitoring Well	SHA	7/3/02	HSA	10 - 25	Silt and Clay	25	
SH-MW3	Monitoring Well	SHA	7/3/02	HSA	10 - 24	Silt and Clay	24	
Soil Boring-1	Soil Boring Only	GeoInsight	8/12/04	HSA	NA	NA	11	Possibly SB-1 on Fig. 2
Soil Boring-2	Soil Boring Only	GeoInsight	8/12/04	HSA	NA	NA	10	Possibly SB-2 on Fig. 2

General Notes:

1. Information based on boring and monitoring well logs prepared by others and in Appendix G.
2. ft = feet.
3. NGVD = National Geodetic Vertical Datum of 1929.
4. SHA = Sanborn Head & Associates, Inc.
5. NA = not applicable.
6. Monitoring wells MW-1 through MW-2 were installed prior to SHAs investigation, which was conducted in 2002.
7. HSA = hollow stem auguer.

Table 6
Chemical Testing Results - Indoor Air Sample from 50 Tufts Street
50 Tufts Street
Somerville, Masachusetts

	Location Name:	AS-1	
	Sample Name:	AS-1	
	Sample Date:	9/21/2004	
	Collected By:	SHA	
	Units:	ug/m^3	ppbV
Analyte	**Method**		
Volatile Organic Compounds (VOCs)	TO-15		
1,1,1 Trichloroethane		212	38.9
1,1 - Dichloroethene		7.89	1.99
2 - Butanone		5.45	1.85
Acetone		31.0	13.1
Benzene		1.60	0.503
Chloroform		3.17	0.650
Chloromethane		1.61	0.780
Ethyl alcohol		55.7	29.6
iso-Propyl alcohol		1.83	0.746
4-Methyl - 2 - pentanone		14.2	3.47
Methyl tert butyl ether		2.95	0.820
p/m - Xylene		4.42	1.02
Heptane		15.8	3.85
Tetrachloroethylene (PCE)		6290	929
Tetrahydrofuran		3.09	1.05
Toluene		9.44	2.51
Trichloroethylene		234	43.5

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/m^3 = micrograms per cubic meter.
3. ppbV = parts per billion by volume.
4. SHA = Sanborn Head & Associates.

Table 7
Chemical Testing Results - Indoor Air Samples from Residential Properties
50 Tufts Street
Somerville, Massachusetts

			Sample Location:	9 Tufts St., basement		9 Tufts St., 1st floor		11 Tufts St., basement				11 Tufts St., 1st floor		17 Tufts St., basement		17 Tufts St., 1st floor		19 Tufts St., basement	
			Sample Name:	IA-6		IA-5		IA-2		IA-2D (duplicate)		IA-1		IA-11		IA-12		IA-13	
			Sample Date:	2/23/05		2/23/05		2/23/05		2/23/05		2/23/05		3/24/2005		3/24/2005		3/24/2005	
			Collected By:	Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental	
Analyte	Method	DEP Background Concentrations in Indoor Air	Units:	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
		ug/m^3	ppbV																
Volatile Organic Compounds (VOCs)	TO-15																		
Chloroform		3	0.6	0.54 J	0.11 J	1.2	0.25	<0.98	<0.20	<0.98	<0.20	2.8	0.57	1.1	0.23	1.9	0.39	<0.98	<0.20
Chloromethane		NS	NS	0.91	0.44	1.0	0.49	0.81	0.39	0.74	0.36	0.99	0.48	0.97	0.47	1.1	0.52	0.85	0.41
Methylene chloride		10	2.83	0.56 J	0.16 J	0.59 J	0.17 J	1.0	0.29	0.9	0.26	0.8	0.23	1.5	0.43	1.0	0.30	0.35 J	0.10 J
Tetrachloroethylene (PCE)		11	1.6	1.3 J	0.19 J	1.8	0.27	1.8	0.26	1.9	0.28	1.0 J	0.15 J	8.8	1.3	4.7	0.69	3.2	0.47
Trichloroethylene (TCE)		5	0.92	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20	0.91 J	0.17 J	<1.1	<0.20	<1.1	<0.20

General Notes:

1. Generally, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data reports in Appendix H.
2. A modified list of TO-15 analytes consisting of only 16 chlorinated VOCs was reported.
3. ug/m^3 = micrograms per cubic meter.
4. ppbV = parts per billion by volume.
5. DEP Background Concentrations obtained from MADEP BWSC NERO Memorandum Subject "Latest Revision of the Indoor Air Contaminants Comparison Table," dated August 2002.
6. NS = No DEP Background Concentration has been established for this compound.
7. "<" = The analyte was not detected at a concentration above the specified limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

Table 7
Chemical Testing Results - Indoor Air Samples from Residential Properties
50 Tufts Street
Somerville, Massachusetts

Sample Location:				19 Tufts St., 1st floor		23 Tufts St., basement		23 Tufts St., 1st floor		25 Tufts St., basement		25 Tufts St., 1st floor		27 Tufts St., basement		27 Tufts St., 1st floor	
Sample Name:				IA-14		IA-8		IA-7		IA-4		IA-3		IA-10		IA-9	
Sample Date:				3/24/2005		2/23/05		2/23/05		2/23/05		2/23/05		2/23/05		2/23/05	
Collected By:				Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental		Shaw Environmental	
Units:				ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV	ug/m^3	ppbV
Analyte	**Method**	**DEP Background Concentrations in Indoor Air**															
		ug/m^3	**ppbV**														
Volatile Organic Compounds (VOCs)	TO-15																
Chloroform		3	0.6	0.78 J	0.16 J	0.88 J	0.18 J	0.63 J	0.13 J	<0.98	<0.20	2.0	0.4	<0.98	<0.20	<0.98	<0.20
Chloromethane		NS	NS	1.1	0.52	1.1	0.54	0.97	0.47	0.74	0.36	0.95	0.46	0.60	0.29	1.2	0.59
Methylene chloride		10	2.83	0.34 J	0.099 J	0.49 J	0.14 J	0.52 J	0.15 J	0.49 J	0.14 J	0.35 J	0.10 J	0.49 J	0.14 J	0.52 J	0.15 J
Tetrachloroethylene (PCE)		11	1.6	0.95 J	0.14 J	2.3	0.34	1.6	0.23	1.6	0.23	<1.4	<0.20	<1.4	<0.20	<1.4	<0.20
Trichloroethylene (TCE)		5	0.92	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20	<1.1	<0.20

General Notes:
1. Generally, only analytes detected in at least one sample are reported here. For a com
2. A modified list of TO-15 analytes consisting of only 16 chlorinated VOCs was reported
3. ug/m^3 = micrograms per cubic meter.
4. ppbV = parts per billion by volume.
5. DEP Background Concentrations obtained from MADEP BWSC NERO Memorandum
6. NS = No DEP Background Concentration has been established for this compound.
7. "<" = The analyte was not detected at a concentration above the specified limit.

Qualifying Notes

J The reported result is below the laboratory reporting limit and is estimated.

Table 8

Minimum and Maximum Detected Concentrations in Indoor Air Samples from Residential Properties

50 Tufts Street
Somerville, Massachusetts

Analyte	Method	Units	Number Sampled	Number of Detects	Frequency of Detection	Minimum Detected		Maximum Detected	
						ug/m3	ppbV	ug/m3	ppbV
Volatile Organic Compounds (VOCs)	TO-15	ug/m^3							
Chloroform			15	9	60%	0.54 J	0.11 J	2.00	0.40
Chloromethane			15	15	100%	0.60	0.29	1.20	0.59
Methylene chloride			15	15	100%	0.34 J	0.099 J	1.50	0.43
Tetrachloroethylene (PCE)			15	12	80%	0.95 J	0.14 J	8.80	1.30
Trichloroethylene (TCE)			15	1	7%	0.91 J	0.17 J	0.91 J	0.17 J

General Notes:

1. Generally, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data reports in Appendix H.
2. A modified list of TO-15 analytes consisting of only 16 chlorinated VOCs was reported.
3. ug/m^3 = micrograms per cubic meter.
4. ppbV = parts per billion by volume.

Qualifying Notes:

J The reported result is below the laboratory reporting limit and is estimated.

Table 9
Chemical Testing Results - Soil Samples
50 Tufts Street
Somerville, Massachusetts

			Location Name:	GEO-1	GEO-1	GEO-4	SH-MW1	SH-MW2	SH-MW3	SH-1	SH-2	SH-3	SH-4	SH-5	SH-B1
			Sample Depth (ft bgs):	0-2	6-8	11-13	10-12	15-17	15-17	12-14	4-5	3-4	8-12	4-8	8-12
			Sample Name:	GEO-1	GEO-1	GEO-4	SH MW1 S3	SH MW2 S4	SH MW3 S4	SH1 S4	SH2 S2A	SH3 S1D	SH4 S3	SH5 S2	SHB1 S3
			Sample Date:	8/12/2004	8/12/2004	8/13/2004	7/3/2002	7/3/2002	7/3/2002	6/21/2002	6/21/2002	6/21/2002	6/21/2002	6/21/2002	6/21/2002
			Collected By:	Geoinsight	Geoinsight	Geoinsight	SHA	SHA	SHA	SHA	SHA	SHA	SHA	SHA	SHA
			Geologic Unit:	Sand	Sand	Sand	Silt and Clay	Silt and Clay	Clay and Silt	Sand	Sand	Sand and Silt	Sand	Sand and Silt	Sand
Analyte	**Method**	**Units**	**Reportable Concentration RCS-1**												
Volatile Organic Compounds (VOCs)	8260B	mg/kg													
Butanone, 2- (MEK)			0.3	<0.673	<0.950	<0.556	<0.0074	<1	<0.0088	<5.5	<7.7	<6.4	<0.540	<6.6	**1.1**
4-Methyl - 2 - pentanone (MIBK)			NS	<673	<950	<556	<7.4	<1000	<8.8	<5500	<7700	<6400	<540	<6600	0.86
Tetrachloroethylene (PCE)			1	**2.45**	**8.07**	0.111	0.01	**23**	0.16	**1500**	**1800**	**140**	**4.8**	**61**	**7.8**
Toluene			30	<0.0673	<0.095	<0.0556	0.0037	<0.160	<0.0013	<0.82	<1.2	<0.96	<0.08	<0.990	<0.1
Trichloroethane, 1,1,1-			30	0.145	1.33	0.0795	<0.00074	0.24	0.0091	<0.55	<0.770	<0.64	0.37	<0.660	2.7
Trichloroethylene (TCE)			0.3	0.164	**1.12**	<0.0556	<0.00074	**0.32**	0.0062	<0.55	**2.0**	<0.64	**1.4**	<0.660	**4.4**
Volatile Petroleum Hydrocarbons (VPH)	MAVPH	mg/kg		NT	NT	NT	NT	NT	NT					NT	
C5-C8 Aliphatics			100							**300**	**833**	43	<1.75		2.95
C9-C12 Aliphatics			1000							<25.9	<29.9	<26.8	<1.75		<2.15
C9-C10 Aromatics			100							<25.9	<29.9	<26.8	<1.75		<2.15
Extractable Petroleum Hydrocarbons (EPH)	MAEPH	mg/kg		NT	NT	NT	NT	NT	NT						
C9-C18 Aliphatics			1000							<10.9	<68.2	<11.2	<10.6	<12.8	<11.1
C19-C36 Aliphatics			2500							<10.9	144	<11.2	<10.6	<12.8	<11.1
C11-C22 Aromatics			200							<10.9	**916**	86.4	<10.6	41.0	<11.1

General Notes:

1. Generally, only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = The analyte was not detected at a concentration above the specified limit.
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective April 3, 2006.
4. Reportable Concentrations (e.g. RCS-1) are cited from the MCP.
5. RCs = MCP Reportable Concentrations.
6. ft bgs = feet below ground surface.
7. mg/kg = milligrams per kilogram.
8. NS = No MCP standard has been established for this analyte.
9. SHA = Sanborn Head & Associates.
10. Results in bold exceed the current applicable RCS-1 standard.

Table 10

Minimum and Maximum Detected Concentrations in Soil Samples

50 Tufts Street
Somerville, Massachusetts

Analyte	Method	Units	Number Sampled	Number of Detects	Frequency of Detection	Minimum Detected	Maximum Detected
Volatile Organic Compounds (VOCs)	8260B	mg/kg					
Butanone, 2- (MEK)			12	1	8%	1.1	1.1
4-Methyl - 2 - pentanone (MIBK)			12	1	8%	0.86	0.86
Tetrachloroethylene (PCE)			12	12	100%	0.01	1800
Toluene			12	1	8%	0.0037	0.0037
Trichloroethane, 1,1,1-			12	7	58%	0.0091	2.7
Trichloroethylene (TCE)			12	7	58%	0.0062	4.4
Volatile Petroleum Hydrocarbons (VPH)	MAVPH	mg/kg					
C5-C8 Aliphatics			5	4	80%	2.95	833
Extractable Petroleum Hydrocarbons (EPH)	MAEPH	mg/kg					
C19-C36 Aliphatics			6	1	17%	144	144
C11-C22 Aromatics			6	3	50%	41	916

General Notes:

1. Only analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. mg/kg = milligrams per kilogram.

Table 11
Chemical Testing Results - Groundwater Samples
50 Tufts Street
Somerville, Massachusetts

			Sample Location:	SH-1	SH-3	SH-MW1	SH-MW2		SH-MW3	MW-1		MW-3		GEO-1	GEO-2	GEO-3	GEO-4	GEO-5	GEO-6
			Sample Name:	SH-1	SH-3	SH MW1	SH-MW2	SH-MW2	SH-MW3	MW-1	MW-1	MW-3	MW-3	GEO-1	GEO-2	GEO-3	GEO-4	GEO-5	GEO-6
			Well Screen Inverval (ft bgs):	9-14	8-13	10-30	10-25	10-25	10-24	unknown	unknown	unknown	unknown	5-20	5-20	5-20	4-19	5-20	5-20
			Sample Date:	8/9/2004	8/9/2004	7/8/2002	7/8/2002	8/16/2004	7/8/2002	7/1/2002	8/9/2004	7/1/2002	8/9/2004	8/16/2004	8/16/2004	8/16/2004	8/16/2004	8/16/2004	8/16/2004
			Collected by:	Geoinsight	Geoinsight	SHA	SHA	Geoinsight	SHA	SHA	Geoinsight	SHA	Geoinsight	Geoinsight	Geoinsight	Geoinsight	Geoinsight	Geoinsight	Geoinsight
Analyte	**Method**	**Units**	**Reportable Concentrations RC-GW2**																
Volatile Organic Compounds (VOCs)	8260B	ug/L																	
Acetone			50000	<4000	<2000	<2500	<250	<2000	<2500	<50000	<40000	<2500	<2000	<400	487	<1000	<2000	<2000	<200
Dichloroethane, 1,1 -			1000	<200	<100	<380	<38	<100	<380	<7500	<2000	<380	<100	<20	23.2	<50	<100	<100	<10
Dichloroethene, 1,1 -			80	<200	<100	<250	<25	<100	<250	<5000	<2000	<250	<100	39.8	<5	**108**	<100	<100	<10
Dichloroethene, cis-1,2-			100	<200	<100	<250	<25	<100	<250	<5000	<2000	<250	<100	<20	<5	<50	<100	<100	14.8
Methyl tert butyl ether			1000	<200	<100	<500	<50	<100	<500	<10000	<2000	<500	<100	<20	37.6	<50	<100	<100	<10
Tetrachloroethylene (PCE)			50	**49700**	**19500**	**21000**	**2000**	**7170**	**26000**	**52000**	**24200**	**16000**	**16200**	**1880**	**285**	**4020**	**12900**	**14400**	**782**
Trichloroethane, 1,1,1 -			4000	1150	2070	<250	660	1550	1200	**290000**	**112000**	<250	<100	1720	490	204	1170	646	27.8
Trichloroethylene (TCE)			30	**906**	**1440**	<500	**190**	**572**	**870**	**220000**	**128000**	<250	<100	**898**	**60**	**507**	**720**	**404**	**122**

General Notes:
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. "<" = The analyte was not detected at a concentration above the specified limit.
3. MCP = 310 CMR 40.0000 Massachusetts Contingency Plan with revisions effective April 3, 2006.
4. Reportable Concentrations (e.g. RC-GW2) are cited from the MCP.
5. RCs = MCP Reportable Concentrations.
6. UCLs = MCP Upper Concentration Limits.
7. ft bgs = feet below ground surface.
8. ug/L = micrograms per liter.
9. SHA = Sanborn Head & Associates.
10. Results in bold exceed the current applicable RC-GW2 standard.

Table 12

Minimum and Maximum Detected Concentrations in Groundwater Samples

50 Tufts Street
Somerville, Massachusetts

Analyte	Method	Units	Number Sampled	Number of Detects	Frequency of Detection	Minimum Detected	Maximum Detected
Volatile Organic Compounds (VOCs)	8260B	ug/L					
Acetone			16	1	6%	487	487
Dichloroethane, 1,1 -			16	1	6%	23.2	23.2
Dichoroethene, 1,1 -			16	2	13%	39.8	108
Dichloroethene, cis-1,2-			16	1	6%	14.8	14.8
Methyl tert butyl ether			16	1	6%	37.6	37.6
Tetrachloroethylene (PCE)			16	16	100%	285	52000
Trichloroethane, 1,1,1 -			16	13	81%	27.8	290000
Trichloroethylene			16	13	81%	60	220000

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the laboratory data sheets.
2. ug/L = micrograms per liter.

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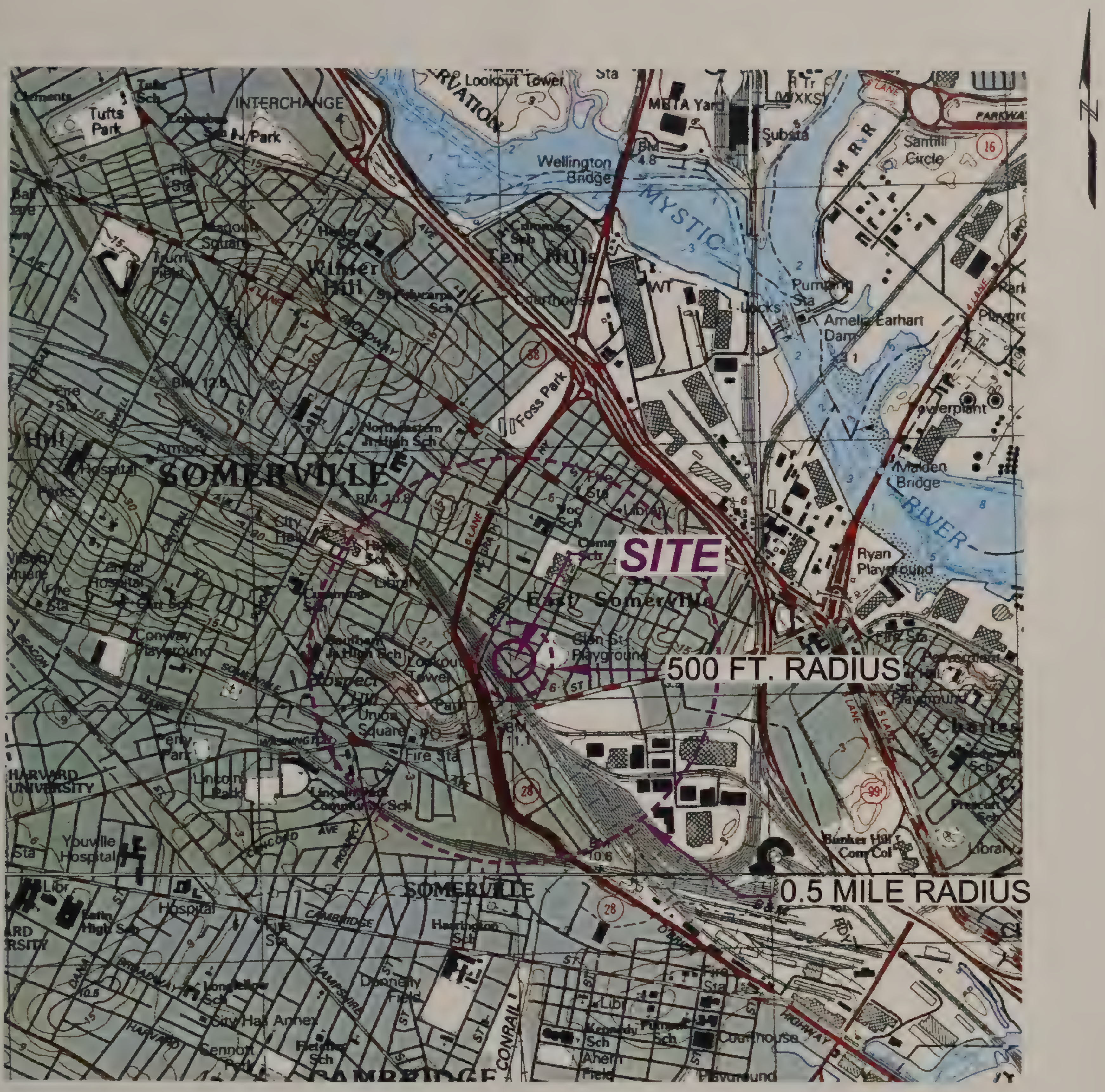
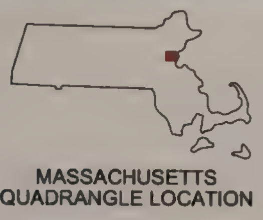
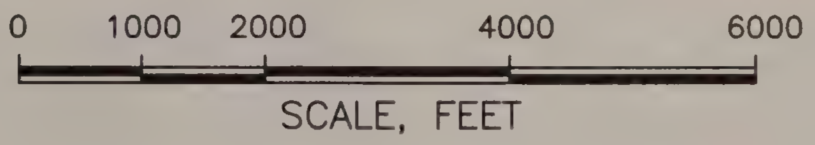
Geotechnical
Environmental and
Water Resources
Engineering



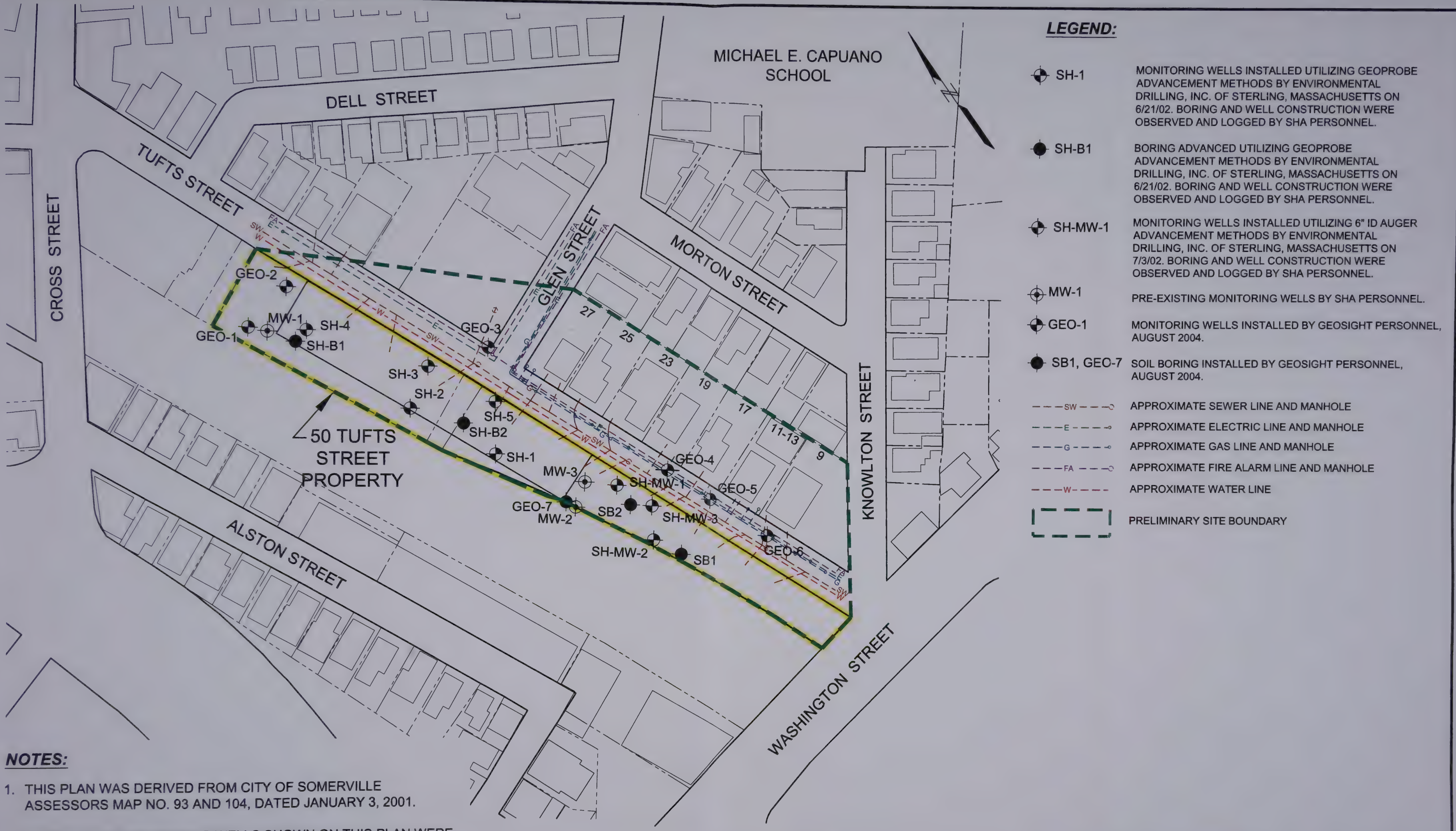




This Image provided by MassGIS is taken from
U.S.G.S. Topographic 7.5 X 15 Minute Series
Boston North, MA Quadrangle, 1985.
Datum is National Geodetic Vertical Datum (NGVD).
Contour Interval is 3 Meters.

Phase I Initial Site Investigation and Tier Classification 50 Tufts Street Somerville, Massachusetts	GEI Consultants	SITE LOCATION MAP
UniFirst Corporation Wilmington, Massachusetts	Project 045160	June 2006 Fig. 1

N: 04516-06 ptc/djm 6/1/06

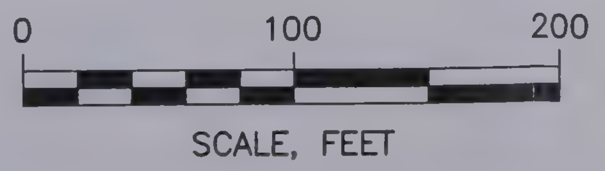


LEGEND:

SH-1	MONITORING WELLS INSTALLED UTILIZING GEOPROBE ADVANCEMENT METHODS BY ENVIRONMENTAL DRILLING, INC. OF STERLING, MASSACHUSETTS ON 6/21/02. BORING AND WELL CONSTRUCTION WERE OBSERVED AND LOGGED BY SHA PERSONNEL.
SH-B1	BORING ADVANCED UTILIZING GEOPROBE ADVANCEMENT METHODS BY ENVIRONMENTAL DRILLING, INC. OF STERLING, MASSACHUSETTS ON 6/21/02. BORING AND WELL CONSTRUCTION WERE OBSERVED AND LOGGED BY SHA PERSONNEL.
SH-MW-1	MONITORING WELLS INSTALLED UTILIZING 6" ID AUGER ADVANCEMENT METHODS BY ENVIRONMENTAL DRILLING, INC. OF STERLING, MASSACHUSETTS ON 7/3/02. BORING AND WELL CONSTRUCTION WERE OBSERVED AND LOGGED BY SHA PERSONNEL.
MW-1	PRE-EXISTING MONITORING WELLS BY SHA PERSONNEL.
GEO-1	MONITORING WELLS INSTALLED BY GEOSIGHT PERSONNEL, AUGUST 2004.
SB1, GEO-7	SOIL BORING INSTALLED BY GEOSIGHT PERSONNEL, AUGUST 2004.
---SW---○	APPROXIMATE SEWER LINE AND MANHOLE
---E---○	APPROXIMATE ELECTRIC LINE AND MANHOLE
---G---○	APPROXIMATE GAS LINE AND MANHOLE
---FA---○	APPROXIMATE FIRE ALARM LINE AND MANHOLE
---W---	APPROXIMATE WATER LINE
▭	PRELIMINARY SITE BOUNDARY

NOTES:

1. THIS PLAN WAS DERIVED FROM CITY OF SOMERVILLE ASSESSORS MAP NO. 93 AND 104, DATED JANUARY 3, 2001.
2. BORINGS AND MONITORING WELLS SHOWN ON THIS PLAN WERE TRANSPOSED FROM A DRAFT PLAN PREPARED BY GEOINSIGHT TITLED "SITE PLAN," DATED 8/23/04.
3. APPROXIMATE UTILITIES LOCATIONS BASED ON A PLAN PREPARED BY GEOINSIGHT TITLED "SITE PLAN", DATED 8/9/04.



Phase I Initial Site Investigation and Tier Classification
50 Tufts Street
Somerville, Massachusetts

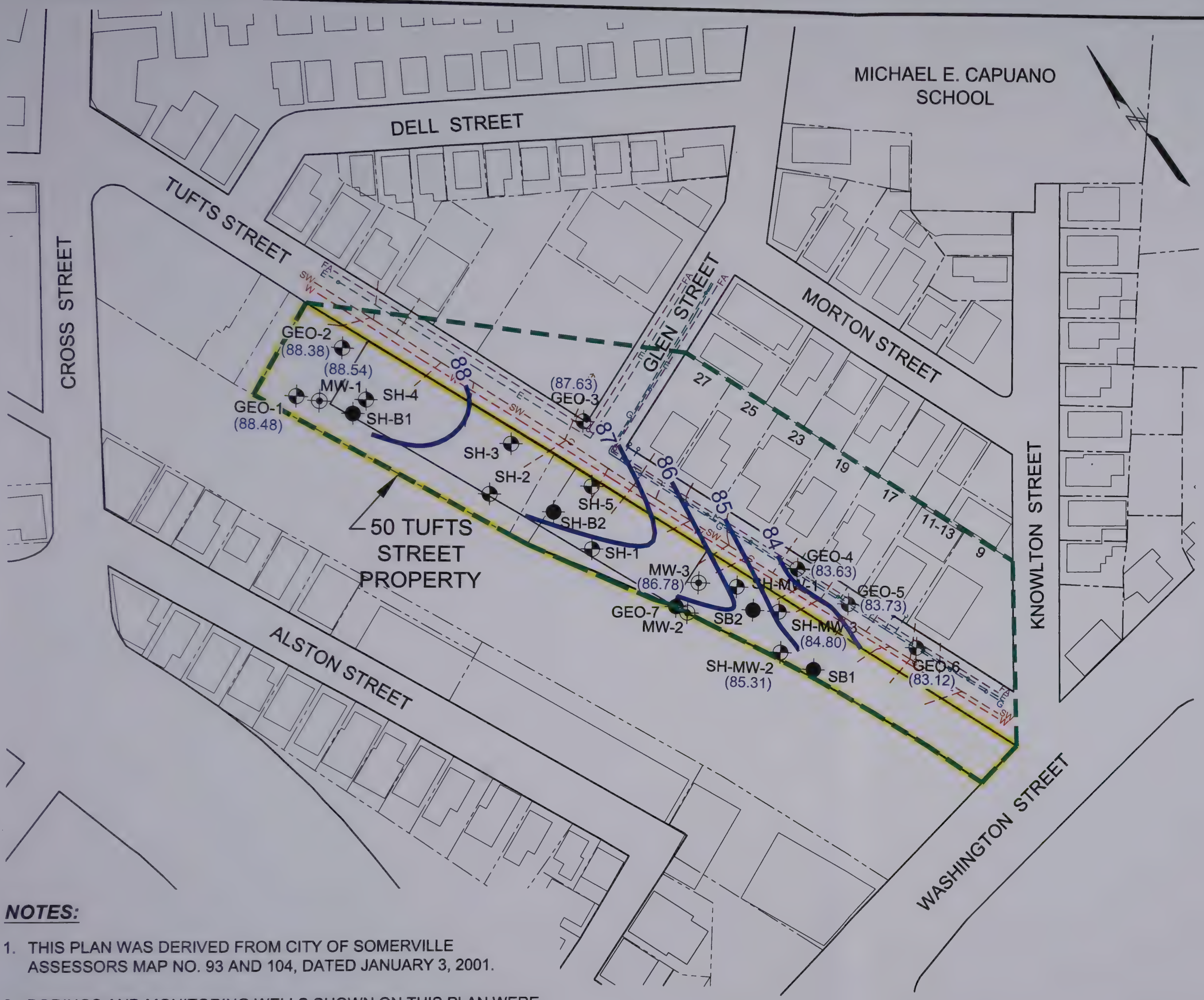
UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

SITE PLAN

Project 04516-0 | June 2006 | Fig. 2

N: 045160-14 djm/ptc 6/1/06



LEGEND:

⊕ SH-1	MONITORING WELLS INSTALLED UTILIZING GEOPROBE ADVANCEMENT METHODS BY ENVIRONMENTAL DRILLING, INC. OF STERLING, MASSACHUSETTS ON 6/21/02. BORING AND WELL CONSTRUCTION WERE OBSERVED AND LOGGED BY SHA PERSONNEL.
● SH-B1	BORING ADVANCED UTILIZING GEOPROBE ADVANCEMENT METHODS BY ENVIRONMENTAL DRILLING, INC. OF STERLING, MASSACHUSETTS ON 6/21/02. BORING AND WELL CONSTRUCTION WERE OBSERVED AND LOGGED BY SHA PERSONNEL.
⊕ SH-MW-1	MONITORING WELLS INSTALLED UTILIZING 6" ID AUGER ADVANCEMENT METHODS BY ENVIRONMENTAL DRILLING, INC. OF STERLING, MASSACHUSETTS ON 7/3/02. BORING AND WELL CONSTRUCTION WERE OBSERVED AND LOGGED BY SHA PERSONNEL.
⊕ MW-1	PRE-EXISTING MONITORING WELLS BY SHA PERSONNEL.
⊕ GEO-1	MONITORING WELLS INSTALLED BY GEOSIGHT PERSONNEL, AUGUST 2004.
● SB1, GEO-7	SOIL BORING INSTALLED BY GEOSIGHT PERSONNEL, AUGUST 2004.
---SW---○	APPROXIMATE SEWER LINE AND MANHOLE
---E---○	APPROXIMATE ELECTRIC LINE AND MANHOLE
---G---○	APPROXIMATE GAS LINE AND MANHOLE
---FA---○	APPROXIMATE FIRE ALARM LINE AND MANHOLE
---W---	APPROXIMATE WATER LINE
▭	PRELIMINARY SITE BOUNDARY
(87.63)	GROUNDWATER ELEVATION (FEET) MEASURED BY GEO INSIGHT AUGUST 16, 2004 (REFERENCED TO AN ARBITRARY BENCHMARK, CASING AT MW-1)
—85—	INFERRED SHALLOW OVERBURDEN GROUNDWATER CONTOUR (FEET)

NOTES:

1. THIS PLAN WAS DERIVED FROM CITY OF SOMERVILLE ASSESSORS MAP NO. 93 AND 104, DATED JANUARY 3, 2001.
2. BORINGS AND MONITORING WELLS SHOWN ON THIS PLAN WERE TRANSPOSED FROM A DRAFT PLAN PREPARED BY GEOINSIGHT TITLED "SITE PLAN," DATED 8/23/04.
3. APPROXIMATE UTILITIES LOCATIONS BASED ON A PLAN PREPARED BY GEOINSIGHT TITLED "SITE PLAN", DATED 8/9/04.

0 100 200
SCALE, FEET

Phase I Initial Site Investigation and Tier Classification
50 Tufts Street
Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

GEI Consultants

Project 04516-0

GROUNDWATER ELEVATION CONTOURS

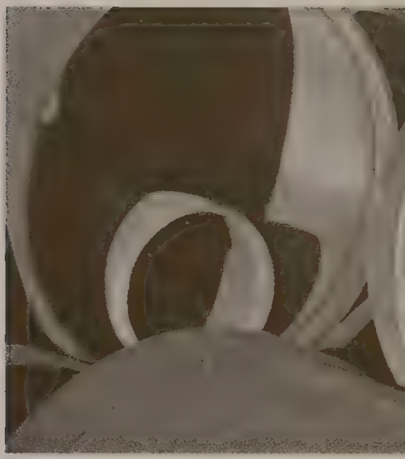
June 2006

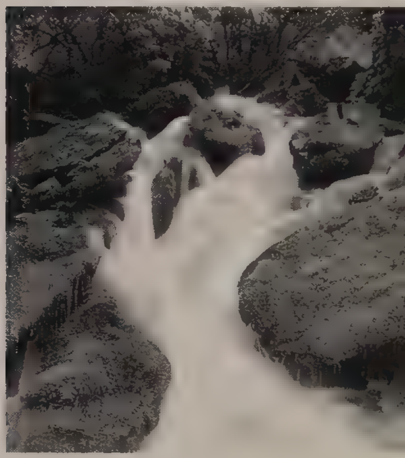
Fig. 3

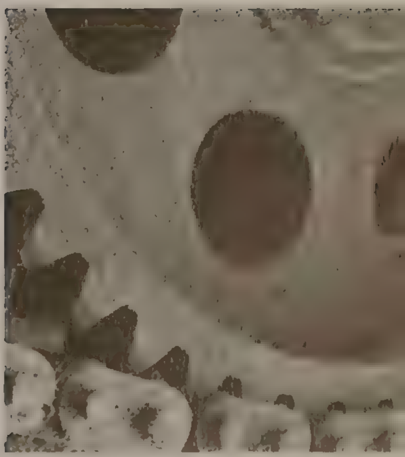
N: 045160-14 djm/ptc 6/1/06

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering







Appendix A

DEP Transmittal Forms, NRS Scoresheet, and Tier I Permit Application

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107

Release Tracking Number
3 - 23246

TIER CLASSIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0500 (Subpart E)

A. DISPOSAL SITE LOCATION:

1. Disposal Site Name:

2. Street Address: 50 Tufts Street

3. City/Town: Somerville 4. ZIP Code: 02145

B. THIS FORM IS BEING USED TO: (check all that apply)

☑ 1. Submit a new **Tier Classification Submittal for a Tier I Site**, including a **Numerical Ranking Scoresheet** (BWSC107A) (check one). A Tier I Permit Application must also be submitted.

☐ a. Tier IA ☐ b. Tier IB ☑ c. Tier IC

☐ 2. Submit a new **Tier Classification Submittal for a Tier II Site**, including the **Numerical Ranking Scoresheet** (BWSC107A) and the **Tier II Compliance History** (BWSC107B).

☑ 3. Submit a **Phase I Completion Statement** as per 310 CMR 40.0480.

If previously submitted, provide date ____________ mm/dd/yyyy

☐ 4. Submit a **Phase II Scope of Work** as per 310 CMR 40.0834.

If previously submitted, provide date ____________ mm/dd/yyyy

☑ 5. Submit a **Phase II Conceptual Scope of Work supporting a Tier Classification Submittal.**

☐ 6. Submit a **Tier II Extension Submittal** for Response Actions at a Tier II Site including the **Tier II Compliance History** (BWSC107B).

☐ 7. Submit a **Tier II Transfer Submittal** for a change in person(s) undertaking Response Actions at a Tier II Site including the **Tier II Compliance History** (BWSC107B) and the **Tier II Transferor Certification** (BWSC107C).

Proposed effective date of transfer : ____________ mm/dd/yyyy

☐ 8. Submit a **Revised Tier Classification Submittal,** including a **Numerical Ranking Scoresheet** (BWSC107A). A Major Permit Modification may also need to be submitted.

If this revised submittal is re-classifying the site check the new classification.

☐ a. Tier IA ☐ b. Tier IB ☐ c. Tier IC ☐ d. Tier II

☑ 9. Submit a **Notice that an additional Release Tracking Number(s) is (are) being linked to this Tier Classified Site** (Primary RTN). Future response actions addressing the Release or Threat of Release notification condition associated with additional Release Tracking Numbers (RTNs) will be conducted as part of the Response Actions planned or ongoing at the Primary Site listed above. For a previously Tier Classified Primary Site, if there is a reasonable likelihood that the addition of the new secondary RTN(s) would change the classification of the site, a **Revised Tier Classification Submittal** must also be made.

Provide Release Tracking Number(s): a. 3 - 24358 b. 3 - 24376

All future Response Actions must occur according to the deadlines applicable to the Primary RTN. Use only the Primary RTN when making future submittals for this site unless specifically relating to response actions started before the linking occurred.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107

TIER CLASSIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0500 (Subpart E)

Release Tracking Number
3 - 23246

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B of this form indicates that a* ***Tier I or Tier II Classification Submittal*** *including the* ***Numerical Ranking System Scoresheet*** *is being submitted*, this Tier Classification Submittal has been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that a* ***Phase I Completion Statement*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that a* ***Phase II Scope of Work*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B of this form indicates that a* ***Tier II Extension Submittal*** *or a* ***Tier II Transfer Submittal*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 9719

2. First Name: Ileen S. 3. Last Name: Gladstone

4. Telephone: (781) 721-4000 5. Ext.: ____ 6. FAX: (781) 721-4073

7. Signature:

8. Date: 6/13/06
mm/dd/yyyy

9. LSP Stamp: ILEEN S. GLADSTONE No. 9719

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107

Release Tracking Number
3 - 23246

TIER CLASSIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0500 (Subpart E)

D. PERSON MAKING SUBMITTAL:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: UniFirst Corporation

3. Contact First Name: Brian 4. Last Name: Keegan

5. Street: 68 Jonspin Road 6. Title: Senior Engineering Manager

7. City/Town: Wilmington 8. State: MA 9. ZIP Code: 01887

10. Telephone: (978) 658-8888 11. Ext.: 645 12. FAX:

E. RELATIONSHIP OF PERSON MAKING SUBMITTAL TO DISPOSAL SITE:

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☑ e. Other RP or PRP Specify: Corporate affiliation with previous owner of property

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Making Submittal Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☑ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☑ 3. Check here to certify that a Legal Notice of a Tier Classification or Re-classification Submittal has been or will be made according to 310 CMR 40.1403, and a copy of the notice sent to DEP, the Chief Municipal Officer and the Local Board of Health.

☐ 4. For a Tier II Extension Submittal, check here to certify that a statement summarizing why a Permanent or Temporary Solution has not been achieved at the Disposal Site is attached.

☐ 5. For a Tier II Transfer Submittal, check here to certify that a statement summarizing the reasons for the proposed change in person(s) undertaking the Response Actions is attached. All Response Actions must be completed by the deadline applicable to the person who first filed either a Tier Classification Submittal for the Disposal Site or received a Waiver of Approvals.

☐ 6. Check here if any non-updatable information provided on this form is incorrect, e.g., Site Name or Street Address. Send corrections to the DEP Regional Office.

☑ 7. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107

Release Tracking Number
3 - 23246

TIER CLASSIFICATION TRANSMITTAL FORM

Pursuant to 310 CMR 40.0500 (Subpart E)

G. CERTIFICATION OF PERSON MAKING SUBMITTAL:

1. I, Brian Keegan, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

If submitting a Tier II Classification, Extension or Transfer, I also attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

2. By: Brian E Keegan
Signature

3. Title: Senior Engineering Manager

4. For: UniFirst Corporation
(Name of person or entity recorded in Section D)

5. Date: 6/2/06
mm/dd/yyyy

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street:

8. City/Town: 9. State: 10. ZIP Code:

11. Telephone: 12. Ext.: 13. FAX:

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY):

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107A

NUMERICAL RANKING SYSTEM (NRS) SCORESHEET

Pursuant to 310 CMR 40.1511 (Subpart O)

Release Tracking Number 3 - 23246

A. NRS SCORESHEET SUMMARY SECTION:

1. Classification Submittal: (check one) ☑ a. Initial NRS Score ☐ b. Revised NRS Score

2. Disposal Site Score:

II	III	IV	V	VI	Total
260	142	25	0	-25	402

3. Disposal Site Classification: (check one)

☐ a. Tier IA ☐ b. Tier IB ☑ c. Tier IC ☐ d. Tier II

B. DISPOSAL SITE INFORMATION (NRS SECTION I):

1. UTM Coordinates: a. UTM N: 4,694,322 b. UTM E: 328,049

2. Check which, if any, of the Tier I inclusionary criteria are met by the Disposal Site, pursuant to 310 CMR 40.0520(2):

☐ a. Groundwater is located within an Interim Wellhead Protection Area or a Zone II, and there is evidence of groundwater contamination by an Oil or Hazardous Material at the time of Tier Classification at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360.

☐ b. An Imminent Hazard is present at the time of Tier Classification.

C. EXPOSURE PATHWAYS (NRS SECTION II):

1. Exposure Pathways, and Oil and Hazardous Material (OHM) Sources:

For A. through D., score according to 310 CMR 40.1512 - Exposure Pathway Designation Criteria and NRS Table II.
For E., score using NRS Table II.E.

	Score
A. Soil (includes sediment)	15
B. Groundwater	20
C. Surface Water (includes wetlands)	0
D. Air	200
E. Number of OHM Sources	25
Total NRS Section II Score (15 - 700)	260

2. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS? ☑ a. Yes ☐ b. No

3. Summary Rationale for Exposure Pathway Values, A. through D., and Phase I Report References:

A. Phase I Report Section 6.1.1, Table 9

B. Phase I Report Section 6.1.2, Table 11

C. Phase I Report Section 7.2

D. Phase I Report Sections 5.1.1 and 5.2, Tables 6 and 7

D. DISPOSAL SITE CHARACTERISTICS (NRS SECTION III):

1. Oil and Hazardous Material (OHM) Toxicity Score (NRS Section III.A.):

a. List the Four Highest OHM Toxicity Scores from NRS Table III.A.:

OHM Scored	Concentration and Media	Toxicity Score (1 - 80)
Trichloroethylene	220,000 ug/L GW	55
1,1,1-Trichloroethane	290,000 ug/L GW	45
Tetrachloroethylene	52,000 ug/L GW	40
C5-C8 Aliphatics	833 mg/kg SO	15

b. Score using NRS Worksheet III.A.1. to determine the OHM Toxicity Score for OHM not listed in NRS Table III.A.:

OHM	Human Health-based Toxicity Value	Concentration (Soil - ug/g)	Concentration (Water - ug/l)	Toxicity Score
Acetone	8	ND	487	15
1,1-Dichloroethene	28	ND	39.8	10
4-methyl-2-pentanone	25	0.86	ND	10
Methyl tert butyl ether	8	ND	37.6	5

c. Use the Highest OHM Toxicity Score from either NRS Table III.A. or Worksheet III.A.1.:

OHM Scored	Toxicity Score
Trichloroethylene	55

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107A

NUMERICAL RANKING SYSTEM (NRS) SCORESHEET

Pursuant to 310 CMR 40.1511 (Subpart O)

Release Tracking Number 3 - 23246

2. Multiple OHMs (NRS Section III.B.):

Was the Toxicity Score of more than one OHM greater than or equal to 30? ☑ a. Yes (30) ☐ b. No (0)

3. OHM Mobility and Persistence (NRS Section III.C.):

Score according to 310 CMR 40.1514 - OHM Mobility and Persistence

a. OHM Scored	b. Score (0 - 50)
Trichloroethylene	45

4. Disposal Site Hydrogeology (NRS Section III.D.):

Score according to 310 CMR 40.1515 - Soil Permeability, and NRS Table III.D.

Site Hydrogeology Score (2-20)
12

5. Total NRS Section III Score:

A.	B.	C.	D.	Total for Section III (3 - 180)
55	30	45	12	142

6. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS? ☐ a. Yes ☑ b. No

E. HUMAN POPULATION AND LAND USES (NRS SECTION IV):

1. Human Population (NRS Section IV.A.):

Score using NRS Table IV.A.

Residential Population within 1/2 Mile	Institutions within 500 Feet	On-site Workers	Population Score (0 - 40)
15	10	0	25

2. Aquifers (NRS Section IV.B.):

a. Sole Source Aquifer: ☐ i. Yes (25) ii. Name: ______________ ☑ iii. No (0)

b. Potentially Productive Aquifer: ☐ i. Medium or High (15) ☑ ii. No (0)

3. Water Use (NRS Section IV.C.):

Score using NRS Table IV.C.

Proximity to Public Drinking Water Source	Persons Served by Public Drinking Water Supply	Private Water Supplies within 500 Feet	Alternate Public Water Supply Available	Water Use Score (0 -125)
0	0	0	0	0

4. Total NRS Section IV Score:

A.	B.	C.	Total for Section IV (0 - 205)
25	0	0	25

5. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS? ☐ a. Yes ☑ b. No

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC107A

NUMERICAL RANKING SYSTEM (NRS) SCORESHEET

Pursuant to 310 CMR 40.1511 (Subpart O)

Release Tracking Number 3 - 23246

F. ECOLOGICAL POPULATION (NRS SECTION V):

1. Environmental Resource Areas (NRS Section V.A.): Score using NRS Table V.A.

Area of Critical Environmental Concern	Species of Special Concern, Threatened or Endangered Species Habitat	Wetlands, Certified Vernal Pool, or Outstanding Resource Water	Fish Habitat	Protected Open Space	Environmental Resource Area Score (0 - 150)
0	0	0	0	0	0

2. Environmental Toxicity Score (NRS Section V.B.):

Score only if Environmental Resource Area Score is greater than or equal to 30.

a. List the Three Highest Environmental Toxicity Scores from NRS Table V.B.:

OHM Scored	Concentration and Media	Toxicity Score (0 - 35)
		0
		0
		0

b. Score using NRS Worksheet V.B.1. to determine the Environmental Toxicity Score for OHM not listed in NRS Table V.B. See 310 CMR 40.1516 for Environmental Toxicity Values for each OHM.

OHM	Environmental Toxicity Value	Concentration (Soil - ug/g)	Concentration (Water - ug/l)	Environmental Toxicity Score
				0
				0
				0

c. Use the Highest Environmental Toxicity Score from either NRS Table V.B. or from Worksheet V.B.1.:

OHM Scored	Toxicity Score
	0

3. Total NRS Section V Score:

A.	B.	Total for Section V (0 - 185)
0	0	0

4. Was Section G (NRS Section VI) used to amend the score for this Section of the NRS? ☐ a. Yes ☑ b. No

BWSC107A

NUMERICAL RANKING SYSTEM (NRS) SCORESHEET

Pursuant to 310 CMR 40.1511 (Subpart O)

Release Tracking Number 3 - 23246

G. MITIGATING DISPOSAL SITE -SPECIFIC CONDITIONS (NRS SECTION VI):

1. Disposal site-specific conditions that warrant amending the site score. Changes directly related to NRS Sections or Subsection scores may not reduce the score more than the relevant subsection value assigned for the disposal site in that subsection. Section VI must reference specific pages of the Phase I. Section VI may not exceed plus or minus 50 points and may be scored only in 5-point increments.

Extractable petroleum hydrocarbon (EPH) and volatile petroleum hydrocarbon (VPH) compounds have been measured in soil above reportable concentrations at two locations beneath the building, indicating a release other than chlorinated volatile organic compounds (VOCs). However, the concentrations are insignificant compared to concentrations of chlorinated VOCs in the soil and groundwater, and a separate remedial approach would not be necessary to address the EPH and VPH.

☐ 2. Check here if additional pages are provided in an attachment.

3. Disposal Site Amendment (Not to exceed plus or minus 50 points):

Total Score Section VI
-25

40.1512 Exposure Pathway Designation Criteria

40.1512(1) Soil

II.A.	**SOIL EXPOSURE CRITERIA**	
DEFINITION	Soil includes sediments.	
DESIGNATION	*CRITERIA*	POINTS
NONE *or* NOT APPLICABLE	*Either of the Following* OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, soil. *or* OHM has not been identified in soils at concentrations > applicable soil Reportable Concentrations (RCs). This criteria may be met by conducting a response action in accordance with these regulations to reduce soil concentrations.	0
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	*Any of the Following* A release of OHM to soil has been identified but no laboratory analysis has been conducted. *or* Qualitative evidence of a release. ! OHM stained soils *or* ! Distressed vegetation *or* ! OHM-attributable odors *or* *or* OHM has been identified in soils at concentrations ≥ applicable RCs.	[✓ 15]
POTENTIAL EXPOSURE PATHWAY	*All of the Following* OHM has been identified at concentrations ≥ applicable soil RCs ≤ 6" from the acessible soil surface. OHM located beneath unbroken paved surfaces/concrete slabs may be considered inaccessible. *and* Efforts to restrict access to the area where a release of OHM has been identified have been unsuccessful, have not been taken, or are infeasible. Fencing may be sufficient to show restriction of access unless there has been evidence of repeated access to areas of OHM-contaminated surficial soils. *and* The area of OHM contamination is not used for active recreation.	100
LIKELY or CONFIRMED EXPOSURE PATHWAY	*All of the Following* OHM has been identified at concentrations ≥ applicable soil RCs ≤ 6" from the accessible soil surface. *and* Efforts to restrict access to the area where a release of OHM has been identified have been unsuccessful, have not been taken, or are infeasible. *and* The area of contamination is used for active recreation (e.g., bicycling, dirt-biking, playground, or ballfield) or gardening.	150

40.1512(2) Groundwater

II.B.	GROUNDWATER EXPOSURE CRITERIA	
DEFINITION	Score source area and extent of plume(s) as defined by most recent field studies.	
DESIGNATION	*CRITERIA*	POINTS
NONE *or* NOT APPLICABLE	*Either of the Following* OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, groundwater. *or* OHM has not been identified in groundwater at concentrations ≥ applicable groundwater RCs. This criteria may be met by conducting a response action, in accordance with these regulations, to reduce groundwater concentrations.	0
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	*Any of the Following* A release of OHM to groundwater has been identified but no laboratory analysis has been conducted. *or* A non-aqueous phase liquid (NAPL) has been identified in or on the groundwater. *or* OHM has been identified in groundwater at concentrations ≥ applicable groundwater RCs.	[✓ 20]
POTENTIAL EXPOSURE PATHWAY	*Either of the Following* A private drinking water well is located within 500' of any portion of a disposal site where OHM has been identified in groundwater at concentrations ≥ 310 CMR 40.0974(2). *or* The disposal site is located within a Zone II or upgradient of a public well within an Interim Wellhead Protection Area *and* OHM has been identified in groundwater at concentrations ≥ 310 CMR 40.0974(2).	100
LIKELY or CONFIRMED EXPOSURE PATHWAY	*Either of the Following* OHM, possibly attributable to the disposal site, has been identified in a public or private drinking water supply well. Drinking water samples shall be taken prior to treatment or blending. *or* A reasonable likelihood exists that a public or private drinking water supply well has been or is likely to be impacted by OHM from the disposal site.	150

40.1512(3) Surface Water

II.C.	**SURFACE WATER EXPOSURE CRITERIA**	
DEFINITION	As defined by 310 CMR 40.0006, including rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and vernal pools.	
DESIGNATION	*CRITERIA*	POINTS
NONE *or* NOT APPLICABLE	OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, surface waters.	[✓ 0]
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	*Any of the Following* A release (past or on-going) of OHM to surface water has been identified. *or* Qualitative evidence of a release. ! OHM-attributable visible sheen or discoloration; *or* ! OHM entering surface water; *or* ! OHM-attributable stained soils in contact with surface water; *or* ! There is a reasonable likelihood that OHM *will* be identified in surface water as a result of OHM migration. *or* OHM, likely attributable to the disposal site, has been identified in groundwater at concentrations that are likely to result in detectable concentrations in surface water.	20
POTENTIAL EXPOSURE PATHWAY	*Either of the Following* OHM, likely to be attributable to the disposal site, has been identified in a surface water known to be used for drinking, swimming, boating or fishing. *or* OHM, likely to be attributable to the disposal site, has been identified at concentrations ≥ Ambient Water Quality Criteria (AWQC) pursuant to 40.1505(2) and 40.1516(1).	100
LIKELY or CONFIRMED EXPOSURE PATHWAY	*Any of the Following* There is a reasonable likelihood that a surface public drinking water supply has been or may be impacted by OHM from the disposal site. *or* OHM, possibly attributable to the disposal site, has been identified at the entry point to a public drinking water supply distribution system. *or* A fish advisory likely attributable to the disposal site is in effect. *or* OHM likely attributable to the disposal site present has been identified at concentrations ≥ Ambient Water Quality Criteria (AWQC) pursuant to 40.1505(2) and 40.1516(1), and the disposal site is located in or contains: an Area of Critical Environmental Concern (ACEC); a mapped habitat of a Species of Special Concern, Endangered or Threatened Species; a Certified Vernal Pool; a Restricted Wetland; an Outstanding Resource Water; a fish habitat; or a Protected Open Space.	150

40.1512(4) Air

II.D.	**AIR EXPOSURE CRITERIA**	
DEFINITION	Air contamination includes both vapors, particularly focusing on indoor air, and particulates. Score only releases regulated under C. 21E; do not score permitted releases associated with on-going commercial or industrial processes.	
DESIGNATION	*CRITERIA*	POINTS
NONE *or* NOT APPLICABLE	OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, air.	0
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	*Any of the following* A release, or potential release, of OHM to air has been identified. *or* OHM that may be released to air as particulate material has been identified in the top 6" of the ground surface. Unbroken paved/concrete slab surfaces *may* be interpreted as preventing release of particulates to air. *or* OHM that may be released to air as a vapor has been identified in an open container or surface impoundment that is part of the disposal site. *or* An odor that is reasonably attributable to a release of OHM at the disposal site has been identified.	15
POTENTIAL EXPOSURE PATHWAY	*Any of the Following* OHM releases, likely attributable the disposal site, have been repeatedly identified in ambient air within 100' of a residence, school, hospital, nursing home, or playground when such releases are above ambient background concentrations and are not related to permitted releases. *or* Total volatile organic compounds have been identified in groundwater at concentrations ≥ 5 mg/l within 30 feet of a school or occupied residence where the depth to groundwater is ≤ 15 feet. Soil gas surveys or indoor air sampling may be conducted to demonstrate no exposure to OHM. *or* A reasonable likelihood exists that the indoor air quality of an occupied building *will be* impacted by OHM likely attributable to the disposal site.	100
LIKELY or CONFIRMED EXPOSURE PATHWAY	*Either of the Following* OHM has been identified in indoor air in an occupied building, above background concentrations, when the OHM is likely attributable to a non-permitted release at the disposal site. *or* A reasonable likelihood exists that OHM likely attributable to the disposal site *is* affecting air quality in an occupied building.	[✓ 200]

40.1511: continued

Table III.A. **OHM TOXICITY SCORE**

OHM	*CONCENTRATION* (soil/sediment: μg/g; surface/groundwater μg/l)						
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"
Aliphatics C5-C8	5	[✓ 15]	25	35	45	55	65
C9-C12	1	10	20	30	40	50	60
C9-C18	1	10	20	30	40	50	60
C19-C36	1	[✓ 10]	20	30	40	50	60
Arsenic	20	30	40	50	60		
Aromatics C9-C10	5	15	25	35	45	55	65
C11-C22	5	[✓ 15]	25	35	45	55	65
Benzene	15	25	35	45	55	65	75
Bis(2-ethylhexyl)phthalate	10	20	30	40	50	60	70
Cadmium	20	30	40	50	60		
Carbon Tetrachloride	20	30	40	50	60	70	80
Chlorobenzene	5	15	25	35	45	55	65
Chromium III	1	10	20	30	40		
Chromium VI	10	20	30	40	50		
Coal Tar	10	20	30	40	50	60	70
Cyanide	5	15	25	35	45		
1,1 Dichloroethane	[✓ 10]	20	30	40	50	60	70
1,2 Dichloroethane	10	20	30	40	50	60	70
Ethylbenzene	5	15	25	35	45	55	65
Ethylene Dibromide	20	30	40	50	60	70	80
#2 Fuel Oil (virgin product)	5	15	25	35	45	55	65
Gasoline (virgin product)	10	20	30	40	50	60	70
Lead	20	30	40	50	60		
Mercury	20	30	40	50	60	70	80
Methylene Chloride	10	20	30	40	50	60	70
Methyl Ethyl Ketone	[✓ 1]	10	20	30	40	50	60
Methyl *Tert* Butyl Ether	5	15	25	35	45	55	65
Nickel	5	15	25	35	45		

40.1511: continued

Table III.A. - continued **OHM TOXICITY SCORE**

OHM	***CONCENTRATION*** (soil/sediment: μg/g; surface/groundwater μg/l)						
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"
Phenol	1	10	20	30	40	50	60
PAHs	10	20	30	40	50	60	70
PCBs	20	30	40	50	60	70	80
Tetrachloroethylene	10	20	30	40	50	60	70
Toluene	1	10	20	30	40	50	60
1,1,1 Trichloroethane	5	15	25	35	45	55	65
Trichloroethylene	15	25	35	45	55	65	75
Vinyl Chloride	15	25	35	45	55	65	75
Xylenes	1	10	20	30	40	50	60
Zinc	1	10	20	30	40		

40.1511 (Continued)

Use Worksheet III.A.1. to determine the OHM Toxicity Score for OHM not listed in Table III.A.

See 40.1513 for Human Health-Based Toxicity Values for each OHM.

Worksheet III.A.1 **OHM TOXICITY SCORE**

HUMAN HEALTH-BASED TOXICITY VALUE	*CONCENTRATION* Use µg/g for Soil and µg/l for Surface Water and Groundwater						
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"
< 5	1	10	20	30	40	50	60
5 - 19	5	15	25	35	45	55	65
20 - 29	10	20	30	40	50	60	70
30 - 39	15	25	35	45	55	65	75
40 - 50	20	30	40	50	60	70	80

III.A.1. *OHM and Concentrations Used in Section III.A.1.*

OHM	Human Health-Based Toxicity Value	Concentration (Soil - µg/g)	Concentration (Water - µg/l)	**OHM Toxicity Score**
Acetone	8	ND	487	15
1.1-Dichloroethene	28	ND	39.8	10
4-methyl-2-pentanone (MiBK)	25	0.86	ND	10
cis-1,2-Dichloroethene	18	ND	14.8	5
Methyl tert butyl ether	8	ND	37.6	5

40.1513(3) Human Health-Based Toxicity Value Matrix

(a) Human Health-Based Toxicity Value Matrix

HUMAN HEALTH-BASED TOXICITY VALUE MATRIX

CANCER SLOPE VALUE (CSV) in $(mg/kg/day)^{-1}$ or *CARCINOGENIC CLASS*	*REFERENCE DOSE (RfD)* in (mg/kg/day)				
	≤ 0.0009	0.0009 < x ≤ 0.0075	0.0075 < x ≤ 0.04 (or No RfD)	0.04 < x ≤ 0.15	> 0.15
≥ 6	50	46	44	42	40
0.9 ≤ x < 6 (or Class A with no CSV)	46	38	34	32	30
0.2 ≤ x < 0.9 (or Class B1 & B2 with no CSV)	45	34	28	25	22
0.03 ≤ x < 0.2 (or Class C with no CSV)	43	32	25	22	20
< 0.03	41	30	22	20	18
Class D or (No Class and CSV)	40	25	18 (*)	8	4
Class E	40	25	17	7	0

(*) DEFAULT	When there is no RfD, no CSV and no Carcinogenic Class, assign a Value of 25.

(b) Defaults

In the absence of a U.S. EPA derived Reference Dose (RfD) from *IRIS* or *HEAST* but when a Carcinogenic Slope Value (CSV) is available, the scorer shall either (1) assign a Human Health-Based Toxicity Value using the RfD default categories indicated in the matrix, *or* (2) identify and document an allowable daily intake which is developed in a manner consistent with the U.S. EPA methodology, and assign a Toxicity Value accordingly.

In the absence of a U.S. EPA derived CSV or carcinogenic group classification from *IRIS*, *HEAST* or another similar database, but when a RfD is available, the scorer shall assign a Toxicity Value using the Class D default category indicated in the matrix.

In the absence of an RfD, CSV and carcinogenic group classification, the scorer shall (1) assign a default Toxicity Value of 25, or (2) identify and document toxicity information analogous to a RfD or CSV and assign a Toxicity Value accordingly.

For radionuclides, no Human Health-Based Toxicity Value has been established. Radionuclides present in quantities greater than their federal Reportable Quantity (40 CFR Part 302.4, Appendix B) where the quantity is known or in concentrations greater than background where the quantity is not known shall be assigned an *OHM Toxicity Score* equal to 50. This score shall be entered directly in Worksheet III.A.1..

40.1514(1) Users shall use the Mobility and Persistence Scores found in the following pages. If a OHM is not found in 310 CMR 40.1514(2) - Organic Compounds or 310 CMR 40.1514(3) - Metals, develop a Mobility and Persistence Score using 40.1514(4) - OHM Mobility and Persistence Factors.

40.1514(2) Mobility and Persistence Values and Scores: Organic OHMs

ORGANIC OHM	MOBILITY AND PERSISTENCE VALUES AND SCORES															TOTAL SCORE
	Solubility (mg/l)			Vapor Pressure (mm Hg)			K_{ow}			Degradation Potential [A]			Specific Gravity (at 20) [B]			
	Value	ref	score	Value	ref.	score	Value	ref.	score	Value	ref	score	Value	ref	score	

Acenaphthene	3.4E+00 [2]	5	1.55E-03 [1(b)]	0	1.0E+04 [2]	5	N-P [8]	0	1.069 [16] (95 /95)	10	**20**
Acetone	1.0E+06	10	2.70E+02 [1(f)]	10	5.8E-01 [1(f)]	10	N-P [15]	0	.791 [16]	0	**30**
Benzene	1.8E+03 [1(a)]	10	9.52E+01 [1(a)]	10	1.3E+02 [1(a)]	5	N-P [7]	0	.879 [16]	0	**25**
Benzo(a)pyrene	1.2E-03 [2]	0	5.60E-09 [1(a)]	0	1.2E+06 [2]	0	P [8,10]	10	1.35 (25) [19]	10	**20**
Benzo(g,h,i)perylene	7.0E-04 [2]	0	1.03E-10 [1(a)]	0	3.2E+06 [2]	0	P [8,10]	10	NA	10	**20**
Benzoic Acid	2.7E+03 [2]	10	(0) [c]	0	7.4E+01 [2]	5	N-P [8]	0	1.316 [16] (28 /4)	10	**25**
Bromodichloromethane	4.4E+03 [2]	10	1.5E+01	10	7.6E+01 [2]	5	P [7]	10	2.006 [16] (15 /4)	10	**45**
Bromoform (Tribromomethane)	3.0E+03 [1(b)]	10	5.00E+00 [1(b)]	10	2.5E+02 [1(b)]	5	P [7]	10	2.903 [16] (15)	10	**45**
Carbon Tetrachloride	7.6E+02 [1(a)]	5	9.00E+01 [1(a)]	10	4.4E+02 [1(a)]	5	P [7]	10	1.594 [16]	10	**40**
Chlorobenzene	4.7E+02 [1(a)]	5	1.17E+01 [1(a)]	10	6.9E+02 [1(a)]	5	N-P [7]	0	1.106 [16]	10	**30**
Chloroethane	5.7E+03 [2]	10	(34)	5	3.5E+01 [2]	5	N-P [12]	0	.903 [16]	0	**20**
Chloroform (Trichloromethane)	8.2E+03 [1(a)]	10	1.51E+02 [1(a)]	10	9.3E+01 [1(a)]	5	P [7]	10	1.49 (20) [17]	10	**45**

2-Chlorophenol	2.9E+04 [2]	10	(0.93)	0	1.5E+01 [2]	5	N-P [7]	0	1.241 [16] (18.2 /15)	10	**25**
p-Dichlorobenzene(1,4)	7.9E+01 [2]	5	1.18E+00 [1(b)]	10	4.0E+03 [2]	5	P [7]	10	1.458 [16] (21)	10	**40**
1,1-Dichloroethane	5.5E+03 [1(a)]	10	1.82E+02 [1(a)]	10	6.2E+01 [1(a)]	5	P [7]	10	1.176 [16]	10	**45**
1,2-Dichloroethane	8.5E+03 [1(a)]	10	6.40E+01 [1(a)]	10	3.0E+01 [1(a)]	5	P [7]	10	1.253 [16]	10	**45**
1,1-Dichloroethylene	2.3E+03 [1(a)]	10	6.00E+02 [1(a)]	10	6.9E+01 [1(a)]	5	P [7]	10	1.250 [16] (15)	10	**45**
cis-1,2-Dichloroethylene	3.5E+03 [1(a)]	10	2.09E+02 [1(a)]	10	5.0E+00 [1(a)]	10	P [7]	10	1.27 (25) [17]	10	**50**
trans-1,2-Dichloroethylene	6.3E+03 [1(a)]	10	3.24E+02 [1(a)]	10	3.0E+00 [1(a)]	10	P [7]	10	1.27 (25) [17]	10	**50**
2,4-Dichlorophenoxyacetic Acid (2,4-D)	6.2E+02 [2]	5	4.00E-01 [1(c)]	5	6.5E+02 [2]	5	N-P [8]	[illegible]	1.255 [20]	10	**25**
Dimethyl Phthalate	4.3E+03 [2]	10	(0)	[illegible]	1.3E+02 [2]	5	N-P [11]	0	1.189 [16] (25 /25)	10	**25**
2,6-Dinitrotoluene	1.3E+03 [2]	10	1.80E-02 [1(b)]	5	1.0E+02 [2]	5	P [8,11]	10	1.283 [16] (111)	10	**40**
1,4-Dioxane	4.3E+05 [2]	10	3.99E+01 [1(d)]	10	1.0E+00 [2]	10	P [14]	10	1.034 [16]	10	**50**
Ethylbenzene	1.5E+02 [1(a)]	5	7.00E+00 [1(a)]	10	1.4E+03 [1(a)]	5	N-P [7]	0	.867 [16]	0	**20**
bis(2-Ethylhexyl)phthalate (DEHP)	2.9E-01 [2]	[illegible]	(0)	0	9.5E+03 [2]	[illegible]	P [8,11]	10	.9843 [16]	[illegible]	**15**
Fuel Oil (virgin product)											**20**

Gasoline (virgin product)											**25**
Heptachlor	1.8E-01 [2]	0	3.00E-04 [1(b)]	0	2.5E+04 [2]	0	P [8]	10	1.57 [1(f)]	10	**20**
Hexachlorobenzene	6.0E-03 [1(a)]	0	1.09E-05 [1(a)]	0	1.7E+05 [1(a)]	0	P [7]	10	2.044 [16]	10	**20**
Hexachloroethane	5.0E+01 [2]	5	4.00E-01 [1(b)]	5	4.0E+04 [2]	0	N-P [8]	0	2.090 [20]	10	**20**
2-Hexanone	1.4E+04 [2]	10	(1.6)	0	2.5E+01 [5]	5	N-P [11]	0	.815 [16] (18 /4)	0	**15**
Isophorone	1.2E+04 [2]	10	(0.3)	0	5.0E+01 [2]	5	N-P [11]	0	.921 (25) [17]	0	**15**
Methylene Chloride	2.0E+04 [1(b)]	10	4.31E+03 [1(d)]	10	1.9E+01 [1(b)]	5	N-P [7]	0	1.366 [18]	10	**35**
Methyl Ethyl Ketone	2.7E+05 [1(a)]	10	7.75E+01 [1(b)]	10	1.8E+00 [1(a)]	10	N-P [15]	0	.805 [16]	0	**30**
Methyl Naphthalene	2.5E+01 [2]	5	(3.2)	0	1.3E+04 [2]	0	N-P [7]	0	1.025 [16] (14 /4)	10	**15**
Methyl Tert-Butyl Ether	4.8E+00 [3]	5	(196)	10	NA	5	NA	0	.731 [16]	0	**20**
Naphthalene	3.2E+01 [2]	5	(20)	5	2.8E+03 [2]	5	N-P [7]	0	1.145 [16]	10	**25**
Nitrobenzene	1.9E+03 [2]	10	1.50E-01 [1(d)]	5	7.1E+01 [2]	5	N-P [8]	0	1.203 [16]	10	**30**
Pentachlorophenol	1.4E+01 [1(b)]	5	1.10E-04 [1(b)]	0	1.0E+05 [1(b)]	0	P [7]	10	1.978 [16] (22)	10	**25**
Phenol	9.3E+04 [1(a)]	10	3.41E-01 [1(a)]	5	2.9E+01 [1(a)]	5	N-P [7]	0	1.071 [16] (25 /4)	10	**30**
PCBs	1.2E-02 [2]	0	7.70E-05 [1(b)]	0	1.1E+06 [2]	0	P [8,9]	10	1.5 (25) [18]	10	**20**
1,1,2,2-Tetrachloroethane	2.9E+03 [2]	10	5.00E+00 [1(a)]	10	2.5E+02 [2]	5	P [8,11]	10	1.600 [18]	10	**45**

Tetrachloroethylene	1.5E+02 [1(a)]	5	1.8E+01 [1(a)]	10	4.0E+02 [1(a)]	5	P [7]	10	1.631 [16] (15 /4)	10	40
Tetrahydrofuran	3.0E-01 [4]	0	(2)	0	6.6E+00 [6]	10	N-P [13]	0	.888 [16] (21 /4)	0	10
Toluene	5.3E+02 [1(a)]	5	2.81E+01 [1(a)]	10	5.4E+02 [1(a)]	5	N-P [7]	0	.866 [16]	0	20
1,2,4-Trichlorobenzene	3.0E+01 [1(a)]	5	2.90E-01 [1(b)]	5	2.0E+04 [2]	0	P [8]	10	1.446 [16] (26)	10	30
1,1,1-Trichloroethane	1.5E+03 [1(a)]	10	1.23E+02 [1(a)]	10	3.2E+02 [1(b)]	5	P [7]	10	1.346 [16] (15 /4)	10	45
1,1,2-Trichloroethane	4.5E+03 [1(a)]	10	3.00E+01 [1(a)]	10	3.0E+02 [1(a)]	5	P [7]	10	1.441 [16] (25.5 /4)	10	45
Trichloroethylene (TCE)	1.1E+03 [1(a)]	10	5.79E+01 [1(a)]	10	2.4E+02 [1(a)]	5	P [7]	10	1.466 [16] (20 /20)	10	45
2,4,6-Trichlorophenol	8.0E+02 [2]	5	1.20E-02 [1(a)]	5	7.4E+03 [2]	5	N-P [8]	0	1.490 [16] (75 /4)	10	25
Vinyl Chloride	2.7E+0 [1(a)]	5	2.66E+03 [1(a)]	10	2.4E+01 [1(a)]	5	P [7]	10	.908 [16] (25 /25)	0	30
Xylenes	2.0E+02 [1(c)]	5	1.00E+01 [1(e)]	10	8.9E+02 [1(c)]	5	N-P [7]	0	.880 [16]	0	20

NOTES

[A] Degradation Potential: N-P = Non-Persistent; P = Persistent. Score for "N-P" = 0; "P" = 10.

[B] Specific gravity of compound at 20 C referred to water at 4 C (20 /4) unless otherwise specified.

[C] Numbers in parentheses are Henry's Law Constant in atm m^3 water/m^3 air.

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[14] Klecka G.M., Gonsoir S.J., "Removal of 1,4-Dioxane from Wastewater," Journal of Hazardous Materials, 13, 161-168, 1986.

[15] Nyer D., Boettcher G., and Morello B., "Using the Properties of Organic Compounds to Help Design a Treatment System," Groundwater Monitoring Review, Fall, 1991, pp. 81-86.

[16] Dean, J.A. ed., "Lange's Handbook of Chemistry", 11th edition, McGraw-Hill Book Co., New York, 1973.

[17] Weiss, G., "Hazardous Chemicals Data Book", 2nd edition, Noyes Data Corp., New York, 1986.

[18] US Public Health Service, Agency for Toxic Substances and Disease Registry, "Draft Toxicological Profile for Selected PCBs," November 1987.

[19] US Public Health Service, Agency for Toxic Substances and Disease Registry, "Draft Toxicological Profile for Benzo(a)pyrene," October 1987.

[20] Merck Index, 9th edition, Merck and Co. Inc., New Jersey, 1976.

40.1514(3) Metals

METAL	Mobility	Score
Arsenic - H_2AsO_4	Slowly mobile	15
Asbestos - > 2μ	Immobile	5
Asbestos - < 2μ	Slowly mobile	15
Beryllium - Be^{++}	Moderately mobile	25
Cadmium - Cd^{++}	Slowly mobile	15
Chromium - Cr^{+++} or Cr^{+6}	Slowly mobile	15
Copper - Cu^{++}	Moderately mobile	25
Cyanide - CN^-	Relatively mobile	35
Lead - Pb^{++}	Moderately mobile	25
Mercury - Hg^{++}	Slowly mobile	15
Selenium - $HSeO_4^-$ & SeO_3^{--}	Relatively mobile	35
Zinc - Zn^{++}	Moderately mobile	25

[1] Fuller, "Movement of Selected Metals, Asbestos, and Cyanide in Soils: Application to Waste Disposal Problems," EPA-600/2-77-020, April 1977.

40.1514(4) OHM Mobility and Persistence Factors for Other Organic Compounds

OHM MOBILITY AND PERSISTENCE FACTORS

Organic Compounds

FACTOR	*RANGE and VALUE*					
	LOW	(Value)	MEDIUM	(Value)	HIGH	(Value)
Solubility (mg/L)	< 1	**(0)**	1 - 1,000	**(5)**	> 1,000	**(10)**
Vapor Pressure (mm Hg)	< 0.01	**(0)**	0.01 - 1	**(5)**	> 1	**(10)**
K_{ow}	> 10,000	**(0)**	10 - 10,000	**(5)**	< 10	**(10)**
Degradation Potential	Non-Persistent (NP)	**(0)**			Persistent (P)	**(10)**
Specific Gravity (20 C)	< 1	**(0)**			> 1	**(10)**

Radionuclides

Radionuclides present in quantities greater than their federal Reportable Quantity (40 CFR Part 302.4, Appendix B) where the quantity is known or in concentrations greater than background where the quantity is not known shall be assigned a *Mobility and Persistence Score* equal to 40.

40.1515 Soil Permeability Criteria

SOIL PERMEABILITY

VALUES	*CRITERIA*
LOW	Permeability: < 10E-7 cm/s Soil or Bedrock Type: clay; shale; compact till; unfractured metamorphic and igneous rocks.
MEDIUM	Permeability: 10E-7 to < 10E-3 cm/s Soil or Bedrock Type: silt, fine sand and silty sand; loess; silty clays; clay loams, silty loams, sandy loams, and loamy sands; less to moderately permeable limestones, dolomites, and sandstone; moderately permeable to coarse till; moderately fractured igneous and metamorphic rocks. Fill is considered moderately permeable unless disposal site-specific condition indicate otherwise.
HIGH	Permeability: ≥ 10E-3 cm/s Soil or Bedrock Type: gravel, sand; highly fractured igneous and metamorphic rocks; permeable basalt and lavas; karst limestone and dolomite.

40.1516 Environmental Toxicity Values

(1) Environmental Toxicity Values

40.1516(1)	**ENVIRONMENTAL TOXICITY VALUES** *(for OHM with Ambient Water Quality Criteria)*				
OHM	AMBIENT WATER QUALITY CRITERIA				
	FRESH WATER ACUTE µg/l	FRESH WATER CHRONIC µg/l	MARINE ACUTE µg/l	MARINE CHRONIC µg/l	**TOXICITY VALUE**
Acenaphthene	1700	520	970	710	20
Acrolein	68	21	55		30
Acrylonitrile	7550	2600			10
Aldrin	3		1.3		40
Antimony	88	30	1500	500	30
Arsenics	850		2319		30
Benzene	5300		5100	700	10
Benzidine	2500				20
Beryllium	130	5.3			30
Benzene Hexachloride	100		0.34		30
Cadmium	3.9	1.1	43	9.3	40
Carbon Tetrachloride	35200		50000		10
Chlordane	2.4	0.0043	0.09	0.004	50
Chloroform	28900	1240			10
Chlorophenol, 2-	4380				20
Chlorophenol, 4-			29700		10
Chlorpyrifos	0.083	0.041	0.011	0.0056	40
Chromium III	1700	210	10300		20
Chromium VI	16	11	1100	50	30
Copper	18	12	2.9		30
Cyanide	22	5.2	1		30
DDT	1.1	0.001	0.13	0.001	50
DDE	1050		14		30
Demeton		0.1		0.1	40
Di-2-Ethylhexyl Phthalate	400	360	400	360	20
Dichlorobenzenes	1120	763	1970		10
Dichloroethane, 1,2-	118000	20000	113000		10
Dichloroethylenes	11600		224000		10
Dichlorophenol, 2,4-	2020	365			20
Dichloropropane	23000	5700	10300	3040	10
Dichloropropene	6060	244	790		20
Dieldrin	2.5	0.0019	0.71	0.0019	50
Dimethylphenol, 2,4-	2120				20
Dinitrotoluene			590	370	10
Dinitrotoluene, 2,4-	330	230			20
Diphenylhydrazine, 1,2-	270				30
Endosulfans	0.22	0.056	0.034	0.0087	40

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 01 – Tier IA
BWSC 02 – Tier IB
BWSC 03 – Tier IC
Initial Application for Tier I Permit

Transmittal Number

3-23246
Release Tracking Number

A. Disposal Site Information

Important: When filling out forms on the computer, use only the tab key to move your cursor – do not use the return key.

☐ 1. Check here if there is more than one applicant. (A Primary Representative must be listed in Section B and each applicant must fill out Sections C, D and E.)

2. Which permit category are you applying for?

☐ a. Tier IA (Permit Category: BWSC 01)
☐ b. Tier IB (Permit Category: BWSC 02)
☒ c. Tier IC (Permit Category: BWSC 03)

☐ d. Check here if applicant is a Homeowner pursuant to 310 CMR 4.02. A Homeowner Certification (BWSC120) must be submitted in order to qualify for the homeowner application fee.

3. a. ______________________
Disposal Site Name

b. 50 Tufts Street
Street

c. Somerville
City/Town

d. MA
State

e. 02145
Zip Code

Note:

Tier IA =
NRS ≥ 550;

Tier IB =
450 ≤ NRS < 550;

Tier IC =
350 ≤ NRS < 450

4. List other release tracking number(s) that is(are) the subject of this permit application.

Release Tracking Number (RTN)

a. 3-24376
b. 3-24358
c. ______________________
d. ______________________
e. ______________________
f. ______________________

5. Basis for Tier Classification:

a. Numerical Ranking System (NRS) Score: 402

☐ b. Check here if basis includes Tier I inclusionary criteria. (Check all that apply.)

☐ i. Evidence of groundwater contamination with oil and/or hazardous material at concentrations equal to or exceeding applicable RCGW-1 reportable concentrations and such groundwater is located within an Interim Wellhead Protection Area or Zone II.

☐ ii. Disposal site at which an Imminent Hazard is present at the time of Tier Classification.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
BWSC 01 – Tier IA
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Initial Application for Tier I Permit

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3-23246
Release Tracking Number

B. Primary Representative Information

Note:
1. If there is **only one** applicant, you do not need to complete this section.

2. If there is **more than one** applicant, then the Primary Representative should complete this page.

3. The **Primary Representative** for multiple applicants will receive the annual compliance assurance fee statement for the disposal site.

1. Primary Representative:

a. Is the Primary Representative also an applicant? ☐ i. Yes ☐ ii. No

b. __________ Name of Organization

c. __________ Name

d. __________ Title

e. __________ Street

f. __________ City/Town

g. __________ State

h. __________ Zip Code

i. __________ Telephone

j. __________ E-mail (optional)

k. __________ Contact Name (if different)

l. __________ Contact Telephone

2. Primary Representative Certification:

I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons submitting this permit application for the following purposes: (i) to receive oral and written correspondence from DEP with respect to this application; (ii) to receive oral and written correspondence from DEP with respect to the performance of response actions conducted pursuant to the Tier I permit; and (iii) to receive any statement of fee required by 310 CMR 4.03(3) associated with the Tier I permit. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

a. __________ Name (Print)

b. __________ Position or Title

c. __________ Signature

d. __________ Date

Transmittal Number:

Release Tracking Number: 3-23246

C. Applicant Information

Note:
1. All applicants must complete this section. Where there is more than one **Applicant**, make copies of this page, have each applicant provide this information, and then attach all copies to this Permit Application.

2. The applicant, or the Primary Representative for more than one applicant, will receive the annual compliance assurance fee statement for the disposal site.

1. Applicant:

a. Name of Organization: Unifirst Corporation
b. Applicant Name: Brian Keegan
c. Title: Senior Engineering Manager
d. Street: 68 Jonspin Road
e. City/Town: Wilmington
f. State: MA
g. Zip Code: 01887
h. Telephone: 978-658-8888
i. E-mail (optional):
j. Contact Name (if different):
k. Contact Telephone:

2. Type of Applicant (check **one**):

☐ a. Individual
☐ b. Sole proprietorship
☐ c. Partnership
☒ d. Corporation
☐ e. Realty trust
☐ f. State authority
☐ g. Municipality
☐ h. State agency
☐ i. Federal agency
☐ j. Other, please specify:

3. Relationship of applicant to disposal site (check all that apply):

☐ a. Current owner (as defined in Section 5(a)(1) of M.G.L. c 21E)
☐ b. Current operator (as defined in Section 5(a)(1) of M.G.L. c 21E)
☒ c. Past owner (as defined in Section 5(a)(2) of M.G.L. c 21E)
☐ d. Past operator (as defined in Section 5(a)(2) of M.G.L. c 21E)
☐ e. Generator (as defined in Section 5(a)(3) of M.G.L. c 21E)
☐ f. Transporter (as defined in Section 5(a)(4) of M.G.L. c 21E)
☐ g. Other legally responsible party (as defined in Section 5(a)(5) of M.G.L. c 21E)
☐ h. Other person (as defined in 310 CMR 40.0006(10))

☐ 4. Check here to certify that additional copies of Sections C, D and E are attached to this application.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
BWSC 01 – Tier IA
BWSC 02 – Tier IB
BWSC 03 – Tier IC
Initial Application for Tier I Permit

Transmittal Number: ______

3-23246
Release Tracking Number

D. Applicant's Compliance History

Note:
Each applicant must complete this section. For disposal sites with more than one **Applicant**, make copies of this section, have each applicant complete this information, and then attach all copies to this Permit Application.

☒ 1. Check here to certify that a statement further describing the applicant's compliance history is attached. See Phase I Report

This statement must describe the applicant's history of compliance with DEP's requirements, including, but not limited to, M.G.L. c. 21E, 310 CMR 40.0000, and other laws for the protection of health, safety, public welfare and the environment administered or enforced by federal, state and local government agencies, that are material to the disposal site. Such a statement should identify information such as: action(s) material to the disposal site taken by DEP to enforce its requirements including, but not limited to Notice of Noncompliance (NON), Notice of Intent to Assess Civil Administrative Penalty (PAN), administrative enforcement order, Notice of Responsibility (NOR), Notice of Intent to Take Response Action (NORA); Administrative Consent Order; Judicial Consent Judgment; similar administrative actions taken by other states, federal, or local agencies; and/or civil or criminal actions material to the disposal site brought on behalf of DEP or other federal, state, or local agencies and any additional information relevant to the applicant's history of compliance. For each action identified, give the name of the issuing authority and identification number, if available, and a description of the noncompliance cited, the current status of the matter, and final disposition, if any.

2. List all other DEP permits or licenses held by the applicant that are material to this disposal site:

Program	Permit Code	Permit Category	Facility ID
a. Air Quality			
b. Hazardous Waste (M.G.L. c. 21C)			
c. Solid Waste			
d. Industrial Wastewater Management			
e. Water Supply			
f. Water Pollution Control: Surface Water			
g. Water Pollution Control: Groundwater			
h. Water Pollution Control: Sewer Connection			
i. Wetlands & Waterways			

3. List all other permits, licenses, certifications, registrations, variances, or other approvals issued by other federal, state, or local authorities and held by applicant that are material to this disposal site:

Issuing Authority	Identification Number	Date Issued
a.		
b.		
c.		

Transmittal Number

3-23246
Release Tracking Number

E. Applicant Certifications

Note: Each applicant must complete this section. For disposal sites with more than one **Applicant**, make copies of this page, have each applicant complete this information, and then attach all copies to this Permit Application.

1. Certification of Submittal

I attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this submittal, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the person or entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. Statement of Ability and Willingness

I attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this permit application and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies') understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made and/is(are) unable to proceed with the necessary response actions.

3. Certification of Remittance of Permit Application Fee

I attest under the pains and penalties of perjury that, on or before the date of submittal of this permit application to the Department, I remitted, or caused to be remitted, the applicable permit fee payable in accordance with 310 CMR 4.00.

4. Applicant Acceptance

a. Brian Keegan
Name (Print)

b. Senior Engineering Manager
Position or Title

c. Brian E Keegan
Signature

d. 6/2/06
Date

Transmittal Number

3-23246
Release Tracking Number

F. Required Technical Submittals with Permit Application

☒ 1. Check here to certify that a Tier I Classification Submittal is attached to this application.

2. Please indicate which of the following response actions are in progress or have been completed at this disposal site at the time of this permit application:

Response Actions	**Completed**	**In Progress**
Preliminary Response Actions:		
a. Limited Removal Action (LRA)	☐	
b. Immediate Response Action (IRA)	☒	☒
c. Release Abatement Measure (RAM)	☐	☐
d. Utility Related Abatement Measure (URAM)	☐	☐
e. Phase I Initial Site Investigation	☒	☐
f. ______________________ Other (specify)	☐	☐
Comprehensive Response Actions:		
g. Phase II Comprehensive Site Assessment	☐	☐
h. Phase III Identification, Evaluation and Selection of Comprehensive Remedial Action Alternatives	☐	☐
i. Phase IV Implementation of the Selected Remedial Action Alternative (Remedy Implementation Plan only)	☐	☐

3. Please indicate which of the following Status Reports, Phase Reports, or Completion Statements have been prepared for response actions that are in progress or have been completed at the disposal site at the time of this permit application.

Document	**Previously Submitted**	**Submitted with this Application**	**Projected Date for Completion**
a. Bill(s) of Lading	☐	☐	________
b. Immediate Response Action (IRA) Plan(s)	☒	☐	________
c. IRA Status Report(s)	☒	☐	________
d. IRA Completion Report(s)	☒	☐	________
e. Release Abatement Measure (RAM) Plan(s)	☐	☐	________

Note:
For response actions in progress, attach a statement of description of the current status and projected schedule for completion of such response actions.

Transmittal Number: ____________

3-23246
Release Tracking Number

F. Required Technical Submittals with Permit Application (cont.)

Document	Previously Submitted	Submitted with this Application	Projected Date for Completion
f. RAM Status Report(s)	☐	☐	
g. RAM Completion Report(s)	☐	☐	
h. Utility-Related Abatement Measures (URAM)	☐	☐	
i. URAM Status Report(s)	☐	☐	
j. URAM Completion Report(s)	☐	☐	
k. Phase I Report and Completion Statement	☐	☒	
l. Phase II Scope of Work	☐	☐	October 2006
m. Phase II Report and Completion Statement	☐	☐	May 2008
n. Phase III Remedial Action Plan and Completion Statement	☐	☐	May 2008
o. Phase IV Remedy Implementation Plan (RIP)	☐	☐	May 2009
p. ____________ Other (specify)	☐	☐	

4. Specify the pages of either the Phase I Report or Phase II Report (if completed) for purposes of supporting the following information:

	Phase I Report	Phase II Report	Page(s)
a. Disposal site location information	☒	☐	4-6
i. Institutions within 500 feet of the disposal site	☒	☐	5
ii. Listing of natural resource areas	☒	☐	5
b. Disposal Site Locus Map	☒	☐	Figure 1
c. Disposal site history	☒	☐	7-11
i. Release history and abatement measures	☒	☐	8-9, 16-20
ii. OHM use and storage history	☒	☐	10
iii. Environmental permits and compliance history	☒	☐	11

F. Required Technical Submittals with Permit Application (cont.)

	Phase I Report	Phase II Report	Page(s)
d. Disposal site hydrogeological characteristics	☒	☐	13-15
i. Groundwater depth and flow direction	☒	☐	15
ii. Soil and bedrock description	☒	☐	14-15
iii. Disposal site topography	☒	☐	14
e. Nature and extent of contamination	☒	☐	21-23
i Thickness of non-aqueous phase liquid, if encountered	☐	☐	Not applicable
ii. Approximate horizontal and vertical extent of contamination	☒	☐	22-23
f. Migration pathways and exposure potential	☒	☐	24-25
i. Contaminant migration potential	☒	☐	24
ii. Potential human exposure	☒	☐	24-25
iii. Potential environmental receptors	☒	☐	25
g. Evaluation for Immediate Response Action(s)	☒	☐	16-20
h. Conceptual Phase II Scope of Work Other (specify)	☒	☐	27
i. Conclusions	☒	☐	28

G. Licensed Site Professional Opinion

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief, this application was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000. I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. 9719
License Number

2. Ileen S. Gladstone
LSP Name (Print)

3. 6/13/06
Date

4. 781-721-4000
Telephone

5.
LSP Signature

6. LSP Seal:

ILEEN S. GLADSTONE No. 9719

ATTACHMENT TO INITIAL APPLICATION FOR TIER I PERMIT (BWSC 03)

List of Status Reports, Phase Reports, Completion Statements, or for response actions in progress, description of current status and schedule (40 CMR 40.0703(1)(j)

Reports	Date Submitted to DEP
"Immediate Response Action Plan and Completion Report, 50 Tufts Street Site, Possible Substantial Release Migration Conditions at 17 Tufts Street and Associated Mitigation of Critical Exposure Pathway, Somerville, Massachusetts, RTN 3-24376," October 7, 2005, by GeoInsight.	October 11, 2005
"Submission of IRA Completion Statement and LSP Opinion for RTN 3-24358, 50 Tufts Street, Somerville, Massachusetts," February 2, 2005, by Sanborn, Head & Associates.	February 2, 2005
"Immediate Response Action Plan, 50 Tufts Street, Somerville, Massachusetts, RTNs 3-23246, 3-24358, and 3-24376," January 9, 2006 by GEI Consultants, Inc.	January 9, 2006
"IRA Status Report No. 1, 50 Tufts Street, Somerville, MA, DEP RTNs 3-23246, 3-24358, and 3-24376," May 8, 2006 by GEI Consultants, Inc.	May 9, 2006
"Phase I Initial Site Investigation and Tier Classification 50 Tufts Street, Somerville, MA, DEP RTNs 3-23246, 3-24358, and 3-24376," June 16, 2006 by GEI Consultants, Inc.	June 16, 2006

IRA Activities Ongoing/Planned	Schedule
Indoor Air Monitoring, Tufts Street Residences	Quarterly (August and November 2006)
Soil Borings & Monitoring Well Installations	Completed (April/May 2006)
Groundwater Sampling	Quarterly (May [completed], August, November 2006, February 2007)
Utility Line Evaluation	June 2006
IRA Status Report No. 2	November 2006

Enter your transmittal number → W085813
Transmittal Number

Your unique Transmittal Number can be accessed online: http://www.mass.gov/dep/counter/trasmfrm.shtml or call DEP's InfoLine at 617-338-2255 or 800-462-0444 (from 508, 781, and 978 area codes).

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: DEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

DEP
P.O. Box 4062
Boston, MA
02211

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

BWSC03 | Tier IC Permit
1. Permit Code: 7 or 8 character code from permit instructions | 2. Name of Permit Category

Permit to Proceed with Response Actions
3. Type of Project or Activity

B. Applicant Information – Firm or Individual

UniFirst Corporation
1. Name of Firm - Or, if party needing this approval is an individual enter name below:

Keegan | Brian |
2. **Last Name** of Individual | 3. **First Name** of Individual | 4. MI

68 Jonspin Road
5. Street Address

Wilmington | MA | 01887 | 978-658-8888 |
6. City/Town | 7. State | 8. Zip Code | 9. Telephone # | 10. Ext. #

Brian Keegan |
11. Contact Person | 12. e-mail address (optional)

C. Facility, Site or Individual Requiring Approval

UniFirst Corporation
1. Name of Facility, Site Or Individual

50 Tufts Street
2. Street Address

Somerville | MA | 02145 | |
3. City/Town | 4. State | 5. Zip Code | 6. Telephone # | 7. Ext. #

| | 3-23246
8. DEP Facility Number (if Known) | 9. Federal I.D. Number (if Known) | 10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

GEI Consultants, Inc.
1. Name of Firm Or Individual

1021 Main Street
2. Address

Winchester | MA | 01890 | 781-721-4012 |
3. City/Town | 4. State | 5. Zip Code | 6. Telephone # | 7. Ext. #

Ileen S. Gladstone | 9719
8. Contact Person | 9. LSP Number (BWSC Permits only)

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

Special Provisions:

1. ☐ **Fee** Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

638209 | $3,550 | 6/14/2006
Check Number | Dollar Amount | Date

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

GEI Consultants, Inc. • Winchester, MA 01890 • (781) 721-4000

PLEASE DETACH AND RETAIN FOR YOUR RECORDS

Account Number: **000000000000000000000000000000 C10351**

Check No. **638209**

Invoice Number	Invoice Date	Voucher No.	Amount
PERMITAPPLICATI TIER IC PERMIT APPLICATION	**6/12/2006**	**91552**	**3,550.00**
		TOTAL:	**3,550.00**

GEI Consultants
1021 Main Street
Winchester, MA 01890-1970

638209

Eastern Bank
LYNN, MASSACHUSETTS 01901

53-179
113

638209

6/13/2006

PAY ****************************3,550** DOLLARS AND *************00** CENTS ****************3,550.00**

TO THE ORDER OF
COMMONWEALTH OF MASS - DEP
DEPT. OF ENVIRONMENTAL PROTECTION
P.O. BOX 4062
BOSTON, MA 02211 US

Robert A Gahl

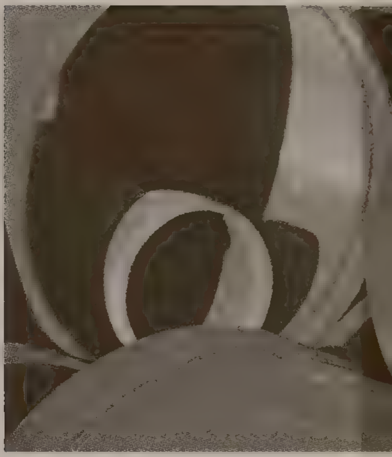
AUTHORIZED SIGNATURE

SECOND SIGNATURE REQUIRED IF OVER $25,000.00

⑈638209⑈ ⑆011301798⑆ 60 0248942⑈

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering



Appendix B

Public Notice Letters and Public Notice

GEI Consultants

June 9, 2006
Project 04516-0

Geotechnical
Environmental and
Water Resources
Engineering

Mayor Joseph A. Curtatone
Somerville City Hall
93 Highland Avenue
Somerville, MA 02143

Dear Mayor Curtatone:

Re: Phase I Initial Site Investigation and Tier IC Classification
50 Tufts Street, Somerville, MA
DEP RTNs 3-23246, 3-24358, and 3-24376

On behalf of the UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. is notifying your office that a Phase I Initial Site Investigation Report (Phase I Report) and Tier IC Classification have been prepared and will be submitted to the Massachusetts Department of Environmental Protection (DEP) Northeast Regional Office in Wilmington, Massachusetts for the above-referenced Site. GEI prepared the Phase I Report and Tier Classification on behalf of UniFirst.

Based on the results of assessments conducted to date, the Site includes the 50 Tufts Street property (the Property) together with portions of properties located across that public street to the east of the Property. A copy of the Executive Summary from the Phase I Report and a Site Plan are attached.

The Massachusetts Contingency Plan (MCP) requires that a public notice in the form of an advertisement be placed in the local newspaper notifying the public that an environmental investigation was conducted at the Site and that a Tier I Permit Application will be submitted to the DEP. The text of the public notice, which will be published in *The Somerville Journal* on June 15, 2006, is attached.

This notification is made in fulfillment of the public notice requirements of the MCP (310 CMR 40.1403). If you have any questions, please contact me at 781.721.4012.

Very truly yours,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP
Vice President

ISG/LAL:lek
Attachment(s)
c: Massachusetts DEP - Northeast Regional Office
Vithal Deshpande, Somerville DPW
Brian Keegan, UniFirst Corporation
N:\04516\cmo_boh_PhI_ltrs 0606.doc

www.geiconsultants.com
GEI Consultants, Inc.
1021 Main Street, Winchester, Massachusetts 01890-1970
781.721.4000 fax: 781.721.4073

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering

June 9, 2006
Project 04516-0

Ms. Noreen Burke
City Hall Annex - Health Department
50 Evergreen Avenue
Somerville, MA 02143

Dear Ms. Burke:

Re: Phase I Initial Site Investigation and Tier IC Classification
50 Tufts Street, Somerville, MA
DEP RTNs 3-23246, 3-24358, and 3-24376

On behalf of the UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. is notifying your office that a Phase I Initial Site Investigation Report (Phase I Report) and Tier IC Classification have been prepared and will be submitted to the Massachusetts Department of Environmental Protection (DEP) Northeast Regional Office in Wilmington, Massachusetts for the above-referenced Site. GEI prepared the Phase I Report and Tier Classification on behalf of UniFirst.

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Very truly yours,

GEI CONSULTANTS, INC.

Ileen S. Gladstone, P.E., LSP
Vice President

ISG/LAL:lek
Attachment(s)
c: Massachusetts DEP - Northeast Regional Office
Vithal Deshpande, Somerville DPW
Brian Keegan, UniFirst Corporation
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Notice of Initial Site Investigation and Waste Site Cleanup Permit Application

50 Tufts Street
Somerville, MA
DEP Release Tracking Numbers 3-23246, 3-24358, 3-24376

Pursuant to the Massachusetts Contingency Plan (310 CMR 40.0480), and Initial Site Investigation has been performed at the above referenced location.

A release of oil and/or hazardous materials has occurred at this location which is a disposal site (as defined by M.G.L. c. 21E, Section 2). This site has been classified as Tier I C (310 CMR 401.0500), and an Initial Tier I C Permit Application is being submitted on June 16, 2006, to the Department of Environmental Protection (DEP) pursuant to 310 CMR 40.0703. A permit is required to proceed with Comprehensive Remedial Responses at all Tier I sites.

Anyone interested in reviewing the permit application should notify DEP by writing to DEP NERO, Bureau of Waste Site Cleanup, Permit Section, 205B Lowell Street, Wilmington, MA 01887 by July 6, 2006. If anyone notifies DEP of his or her interest in reviewing or submitting comment on the Tier I permit application, DEP will conduct a public comment review period of twenty (20) days which shall run concurrently with DEP's Initial Technical Review of the application. Anyone who fails to notify DEP in writing of his/her interest in commenting on the application by the above date may be deemed to have waived his/her rights, if any, to appeal DEP's permit decision or to intervene in an adjudicatory proceeding with respect to this application, pursuant to 310 CMR 40.0 0770(2).

M.G.L. c.21E and the Massachusetts Contingency Plan provide additional opportunities for public notice of and involvement in decisions regarding response action at disposal site: 1) The Chief Municipal Official and Board of Health of the community in which the site is located will be notified of major milestones and events, pursuant to 310 CMR 40.1403; and 2). Upon receipt of a petition from ten or more residents of the municipality in which the disposal site is located, or of a municipality potentially affected by a disposal site, a plan for involving the public in decisions regarding response actions at the site will be prepared and implemented, pursuant to 310 CMR 40.1405.

To obtain more information on this disposal site and the opportunities for public involvement during its remediation, please contact Brian Keegan, Senior Engineering Manager, UniFirst Corporation, 68 Jonspin Road, Wilmington, MA 01887 at 978.658.8888, or Ileen S. Gladstone P.E., LSP, Vice President, GEI Consultants, Inc., 1021 Main Street, Winchester, MA 01890 at 781.721.4000.

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Executive Summary
Phase I Initial Site Investigation and Tier Classification
50 Tufts Street, Somerville, MA
DEP RTNs 3-23246, 3-24358, 3-24376

GEI Consultants, Inc. prepared this Phase I Initial Site Investigation (Phase I Report) and Tier Classification on behalf of UniFirst Corporation of Wilmington, Massachusetts, for the Site located at 50 Tufts Street in Somerville, Massachusetts (the Site; Fig. 1). Based on the results of assessments conducted to date, the Site includes the 50 Tufts Street property (the Property), together with portions of properties located across that public street to the east of the Property. The Massachusetts Department of Environmental Protection (DEP) has assigned release tracking numbers (RTNs) 3-23246, 3-24358, and 3-24376 to the Site.

The Property is approximately 51,111 square feet and developed with an approximately 20,594 square feet, one-story masonry block building. The majority of the building is warehouse space and a small portion is office space. The building was constructed in two phases. The northern portion was constructed about 1955 and was approximately 8,400 square feet. An approximately 12,200 square foot addition was constructed in 1977. From the mid-1950s through 2002, several different business entities distributed laundry and dry cleaning supplies at the Property. The Property building is currently unoccupied.

Chlorinated volatile organic compounds (VOCs), particularly tetrachloroethylene (also called perchloroethylene [PCE]), have been measured in soil, groundwater, and indoor air at the Site. The source of the chlorinated VOCs is likely associated with the historic handling, storage, and distribution of laundry and dry cleaning chemicals at the Site. The highest concentrations of chlorinated solvents in groundwater were measured in samples collected from a well at the northwestern-corner of the building. The highest concentrations of chlorinated VOCs in soil were detected in samples collected from two borings advanced within the building footprint on the western side of the Property building. VOCs were measured in an indoor air sample collected in the Property building.

Chlorinated VOCs have been detected in groundwater samples collected from monitoring wells across Tufts Street from the Property. In 2005, DEP conducted indoor air testing for PCE and other VOCs in a number of homes located on Tufts Street. DEP sent a letter to each homeowner summarizing the results of its testing and reported that the PCE detected during the indoor air testing was below DEP's "threshold limit" for "significant risk of harm to health over a short period of time" and "below the levels DEP typically finds in homes."

For purposes of Tier Classification, the Site was scored using the Numerical Ranking System (NRS). Based on an NRS score of 402, the Site is classified as Tier IC and a Tier I permit is required.

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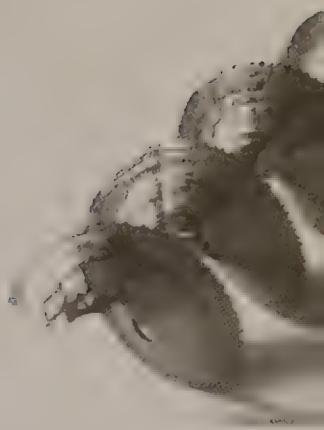
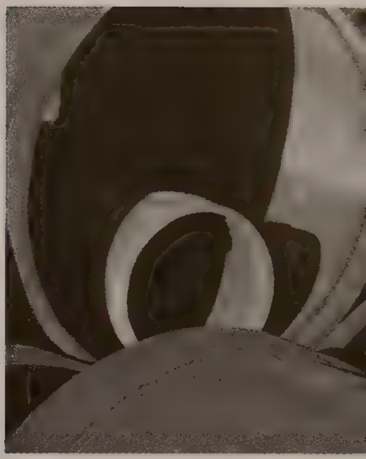
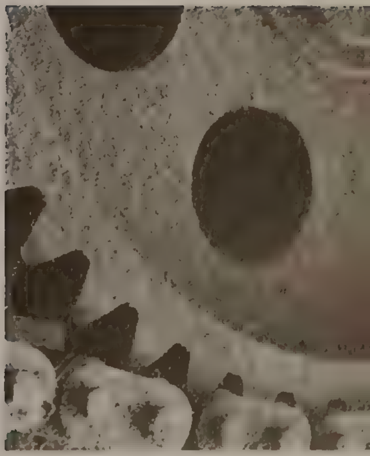






Appendix C

MassGIS Map

MA DEP - Bureau of Waste Site Cleanup

Site Scoring Map: 500 feet & 0.5 Mile Radii

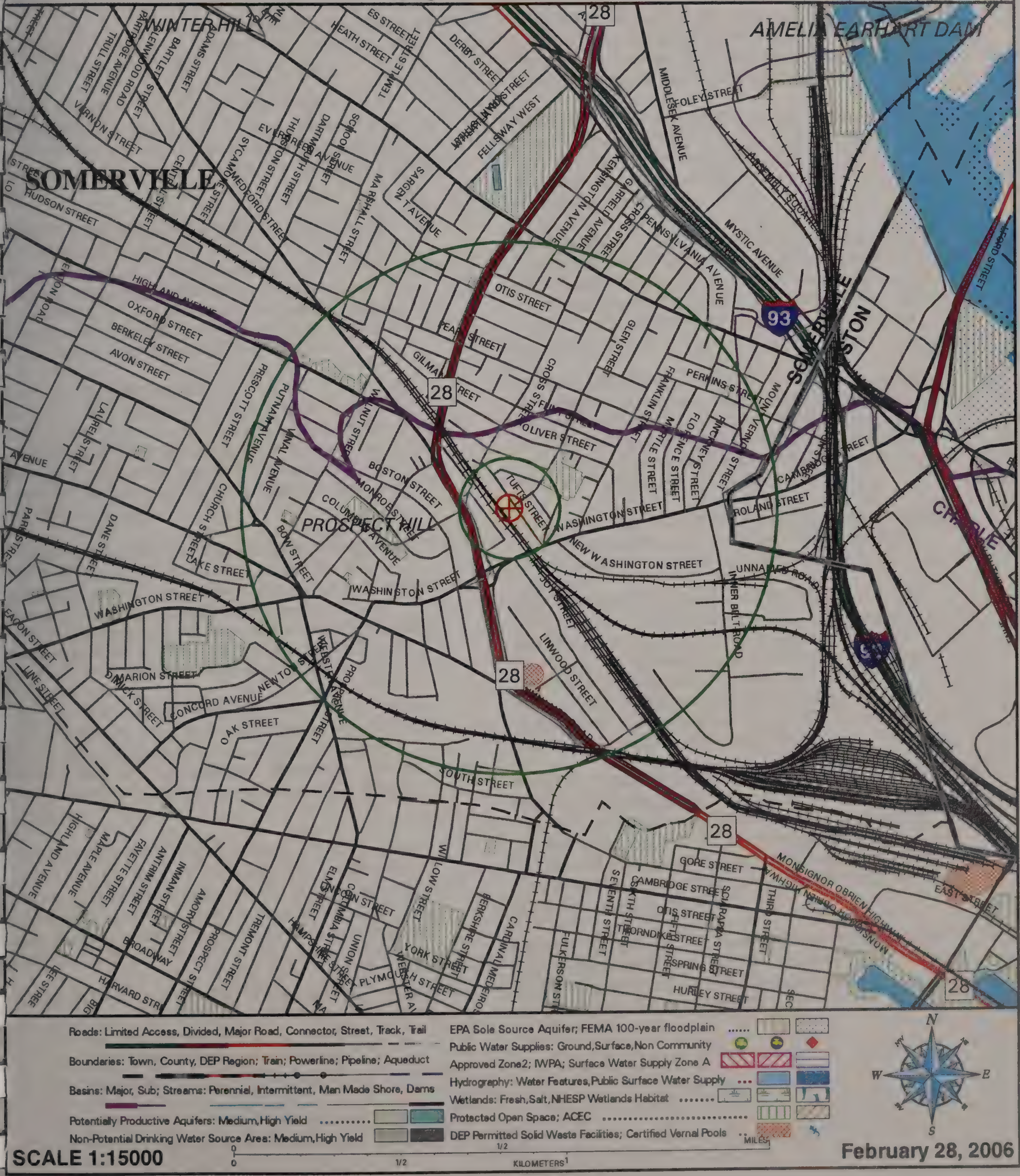
SITE NAME:

50 Tufts Street
Somerville, MA 02145
903587n 233867ew

Site Location

The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.

MASS GIS
Office of Geographic and Environmental Information
Massachusetts Executive Office of Environmental Affairs - 2006



February 28, 2006

NRS (21e) SCORING MAP DATA SOURCES

AQUIFERS: USGS-WRD/MassGIS, 1:48,000. Automated by MassGIS from the USGS Water Resources Div. Hydrologic Atlas series manuscripts. The definitions of high and medium yield vary among basins. Source dates 1977-1988.

SOLE SOURCE AQUIFERS: US EPA/MA DEP/MassGIS, various scales. EPA defines them as aquifers that are the 'sole or principal source' of drinking water for a given aquifer service area. Last updated May 1996.

NON-POTENTIAL DRINKING WATER SOURCE AREAS: DEP-BWSC (Bureau of Waste Site Cleanup). Those portions of high and medium yield aquifers, which may not be considered as areas of groundwater conducive to the locations of public water supplies. Please refer to the MCP guidelines for the definitions of these areas. Last updated November 2003.

DEP APPROVED ZONE II's: MA DEP, 1:25,000. As stated in 310 CMR 22.02 'that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated.' Digitized from data provided to DEP in approved hydrologic engineering reports. Data are updated continually.

INTERIM WELLHEAD PROTECTION AREAS: DEP-DWS (Division of Water Supply), 1:25,000. These polygons represent an interim Zone II for a groundwater source until an actual one is approved by the DEP Division of Water Supply. The radius of an IWPA varies according to the approved pumping rate. Updated in parallel with the Public Water Supplies data.

PUBLIC WATER SUPPLIES: DEP-DWS, 1:25,000. Community and non-community surface and withdrawal points were field collected using Global Positioning System receivers. The attributes were added from the DEP Division of Water Supply database. Continually updated.

HYDROGRAPHY: USGS/MassGIS. 1:25,000 USGS Digital Line Graph (DLG) data modified by MassGIS. Approximately 40% of the data was provided by USGS and MassGIS created the remainder to USGS specifications. Source dates 1977-1997. Last updated February 2005.

DRAINAGE BASINS: USGS-WRD/MassGIS, 1:24,000. Automated by MassGIS from USGS Water Resources Division manuscripts with approximately 2400 sub-basins as interpreted from 1:24,000 USGS quadrangle contour lines. 1987-1993. Last update March 2003.

WETLANDS: UMass Amherst RMP/MassGIS, 1:25,000. Includes nonforested wetlands extracted from the 1999 Land Use datalayer, which was photointerpreted from summer CIR photography. Interpretation was not done in stereo. Also includes, in most areas, forested wetlands from USGS Digital Line Graph (DLG) data.

PROTECTED OPEN SPACE: EOEA (Executive Office of Environmental Affairs) MassGIS, 1:25,000. Includes federal, state, county, municipal, non-profit and protected private conservation and outdoor recreation lands. Ongoing updates.

ACECs: DEM, 1:25,000. Areas of Critical Environmental Concern are areas designated by the Secretary of EOEA as having a number of valuable environmental features coexisting. Projects in ACECs are subject to the highest standards of review and performance. Last updated December 2003.

ROADS: USGS/MassGIS/MHD, 1:100,000. MassGIS extracted roads from the USGS Transportation DLG files. MA Highway Dept. updated roads through July 2004. MassGIS and MA DEP GIS group further edited this layer. Numbered routes are part of the state, U.S. or Interstate highway systems.

POLITICAL BOUNDARIES: MassGIS/USGS, 1:25,000. This datalayer was digitized by MassGIS from mylar USGS quads. Source date is approximately 1985.

DEP PERMITTED SOLID WASTE FACILITIES: DEP-DSW (Division of Solid Waste), 1:25,000. Includes only facilities regulated since 1971. Data includes sanitary landfills, transfer stations and recycling or composting facilities. Facility boundaries were compiled or approximate facility point locations drafted onto USGS quadrangles and automated by the DEP Division of Solid Waste. Last updated November 2003.

NHESP ESTIMATED HABITATS OF RARE WETLANDS WILDLIFE: Polygons show estimated habitats for all processed occurrences of rare wetlands wildlife. Data collected by Natural Heritage & Endangered Species Program and compiled at 1:24,000 or 1:25,000 scale. For use with Wetlands Protection Act Only. Effective 2005-2007.

NHESP CERTIFIED VERNAL POOLS: Points show all vernal pools certified by NHESP/MADFW (Fisheries and Wildlife) as of June 30, 1999. Data compiled at 1:24,000 or 1:25,000 scale. Effective 2005-2007.

Last revised: July 1, 2005

GEI Consultants

Geotechnical
Environmental and
Water Resources
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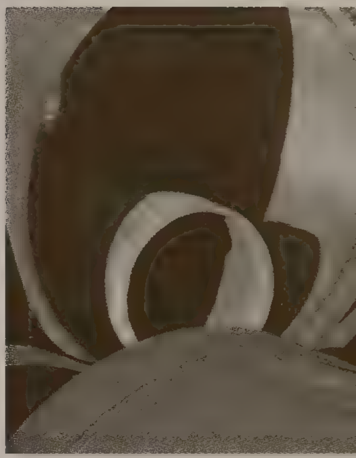

Appendix D

Historic Sanborn Maps and City of Somerville Atlas Maps

EDR® Environmental Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Leslie Lombardo
GEI Consultants, Inc.
1021 Main Street
Winchester, MA 01890

Customer Project: 045160
011503PVC 617-721-4066

Order Date: 4/20/2006 **Completion Date:** 4/24/2006
Inquiry #: 1658254.1s
P.O. #: 045160
Site Name: 50 Tufts Street
Address: 50 Tufts Street
City/State: Somerville, MA 02145
Cross Streets:

Based on client-supplied information, fire insurance maps for the following years were identified

1888 - 1 Map
1900 - 1 Map
1933 - 1 Map
1950 - 1 Map
1989 - 1 Map
1991 - 1 Map

Limited Permission to Photocopy Total Maps: 6

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USER'S GUIDE

This User's Guide provides guidelines for accessing Sanborn Map® images and for transferring them to your Word Processor.

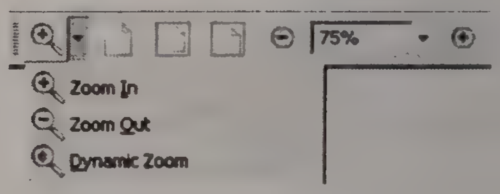
Reading Sanborn Maps

- Sanborn Maps document historical property use by displaying property information through words, abbreviations, and map symbols. The Sanborn Map Key provides information to help interpret the symbols and abbreviations used on Sanborn Maps. The Key is available from EDR's Web Site at: http://www.edrnet.com/reports/samples/key.pdf

Organization of Electronic Sanborn Image File

- Sanborn Map Report, listing years of coverage
- User's Guide
- Oldest Sanborn Map Image
- Most recent Sanborn Map Image

Navigating the Electronic Sanborn Image File

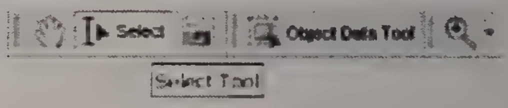


1. Open file on screen.
2. Identify TP (Target Property) on the most recent map.
3. Find TP on older printed images.
4. Using Acrobat® Reader®, zoom to 250% in order to view more clearly. (200-250% is the approximate equivalent scale of hardcopy Sanborn Maps.)
    A. On the menu bar, click "View" and then "Zoom to..."
    B. Or, use the magnifying tool and drag a box around the TP

Printing a Sanborn Map From the Electonic File

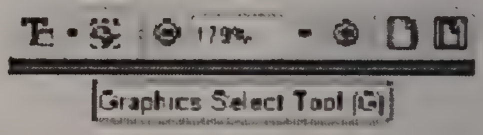
- EDR recommends printing images at 300 dpi (300 dpi prints faster than 600 dpi)
- To print only the TP area, cut and paste from Acrobat to your word processor application.

Acrobat Versions 6 and 7



1. Go to the menu bar
2. Click the "Select Tool"
3. Draw a box around the area selected
4. "Right click" on your mouse
5. Select "Copy Image to Clipboard"
6. Go to Word Processor such as Microsoft Word, paste and print.

Acrobat Version 5



1. Go to the menu bar
2. Click the "Graphics Select Tool"
3. Draw a box around the area selected
4. Go to "Menu"
5. Highlight "Edit"
6. Highlight "Copy"
7. Go to Word Processor such as Microsoft Word, paste and print.

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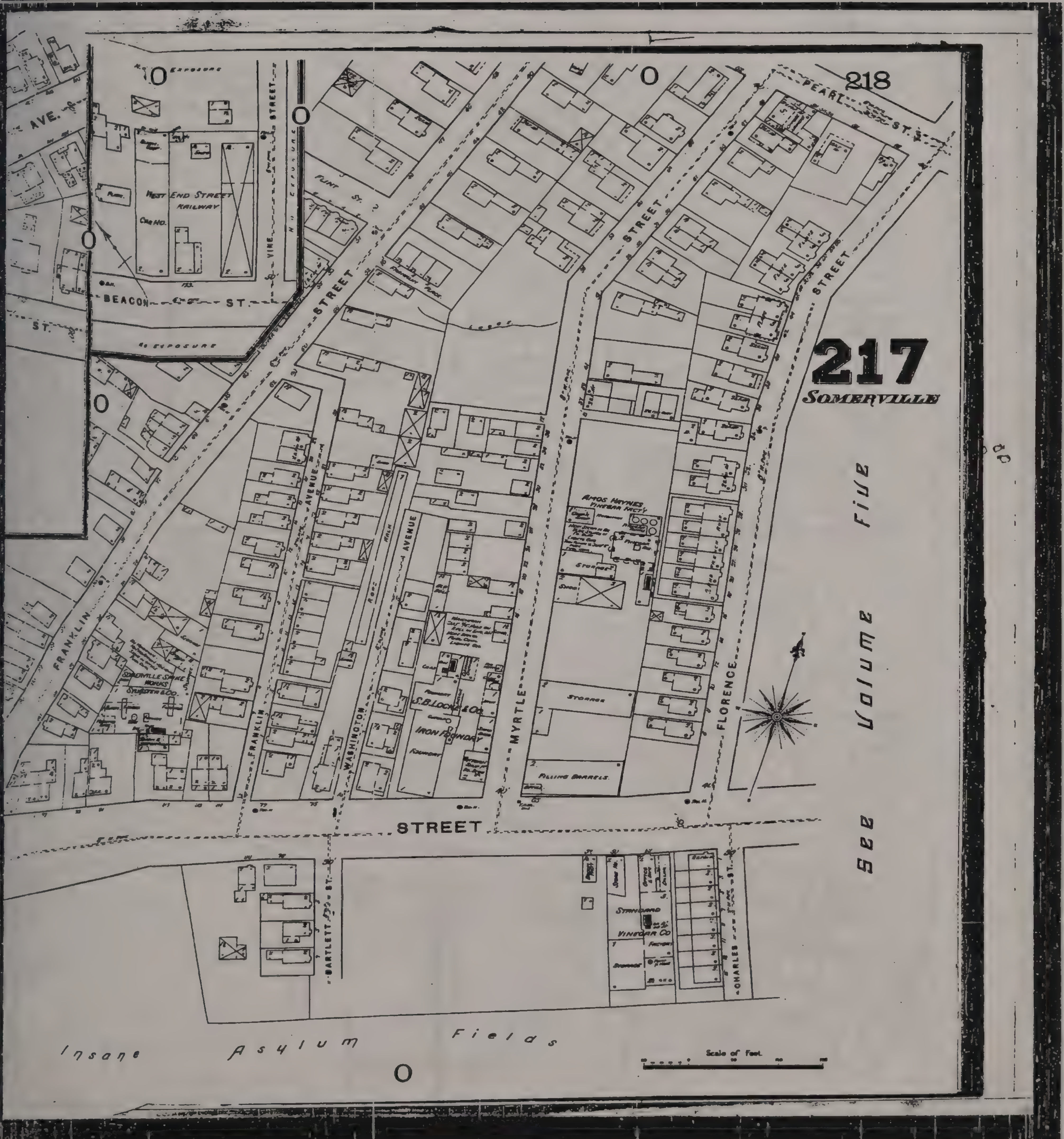

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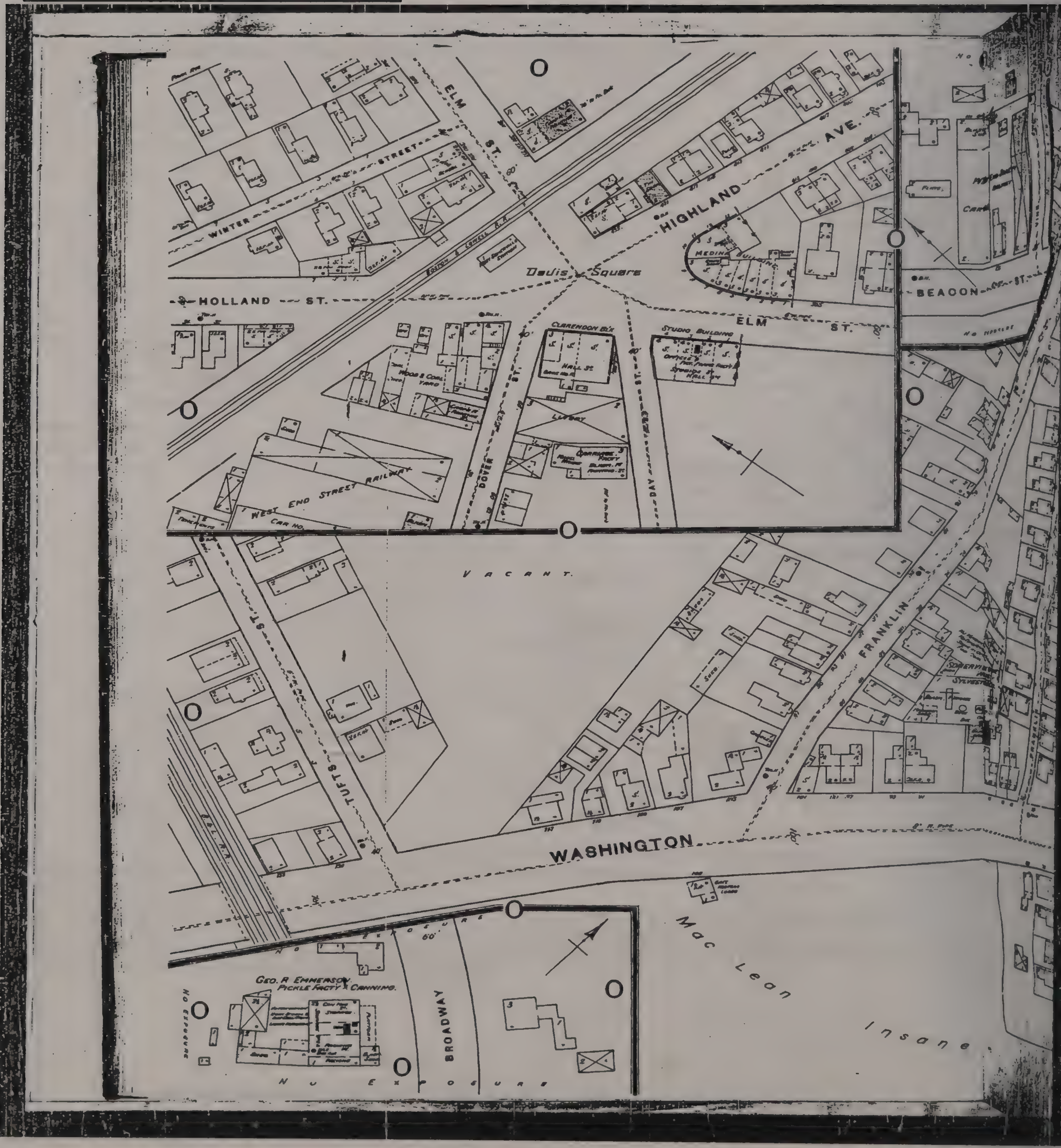

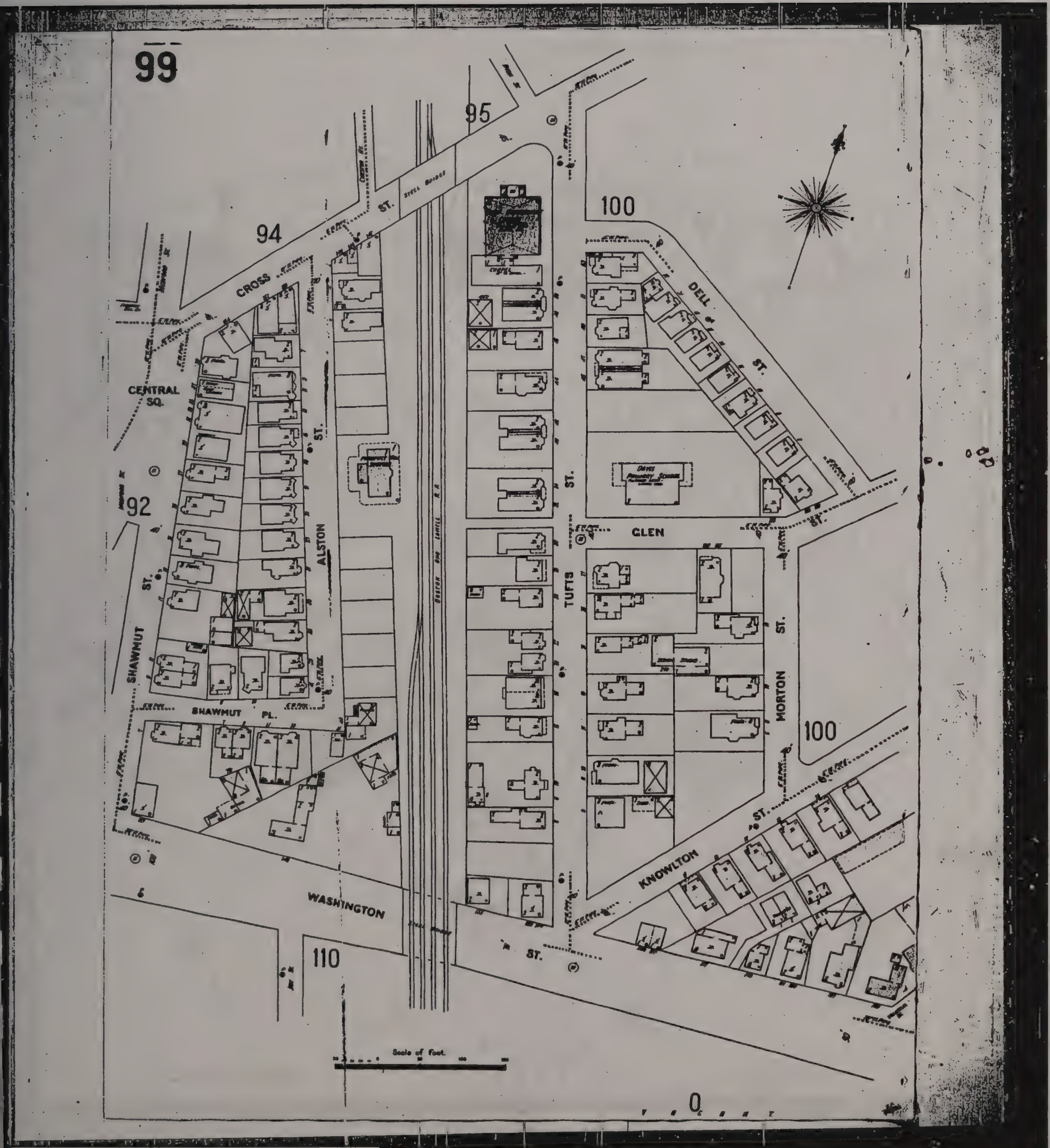

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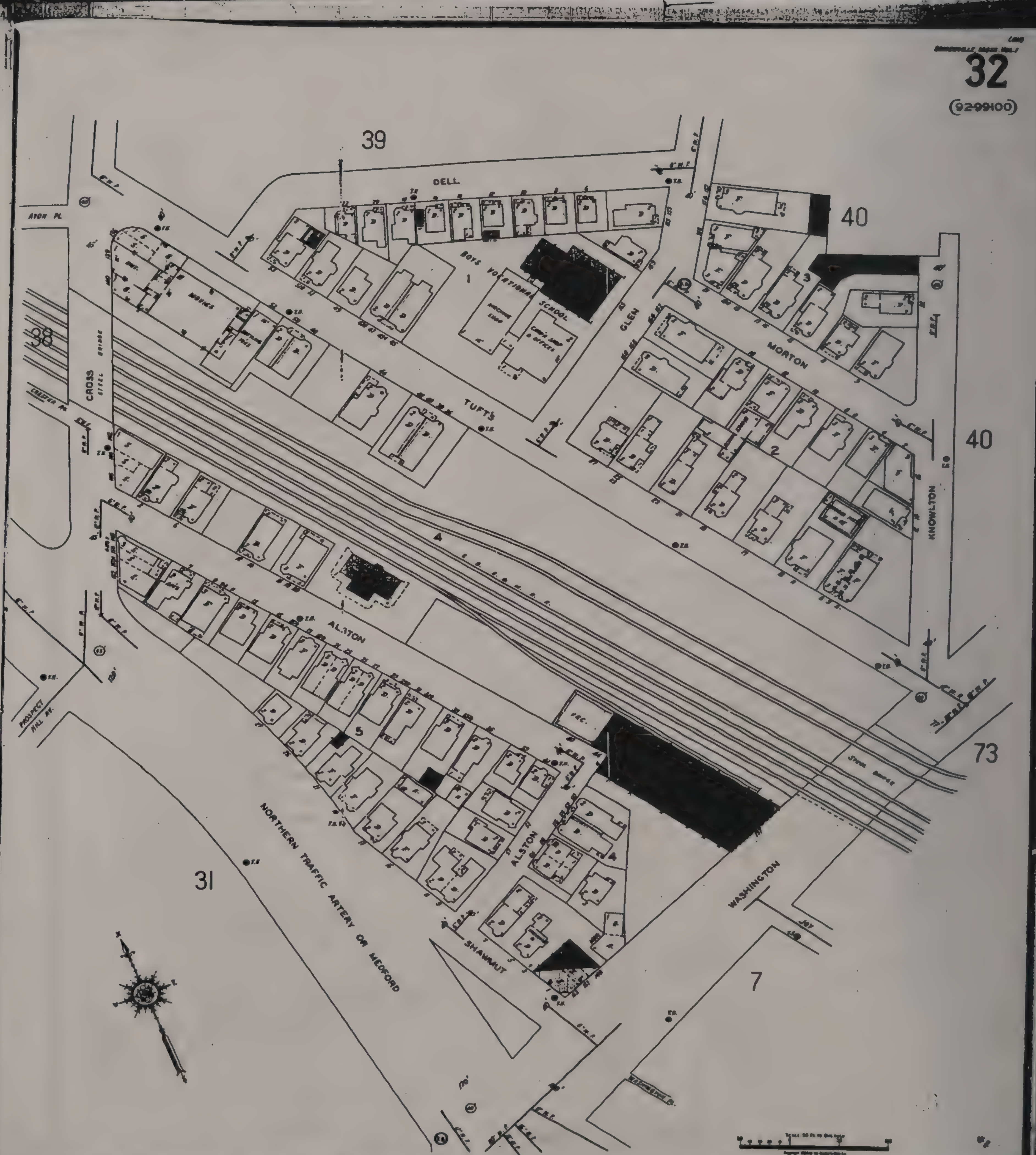

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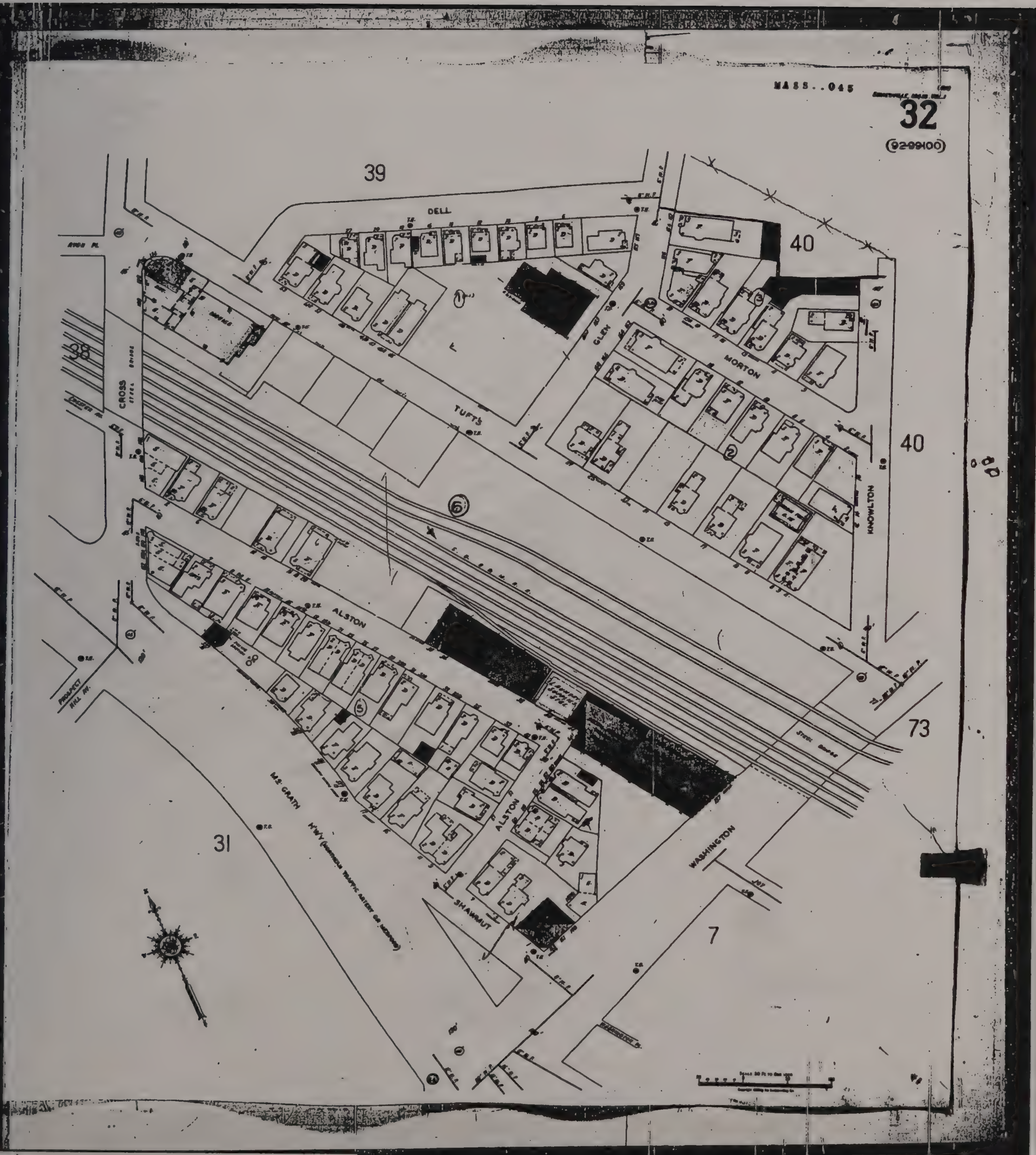

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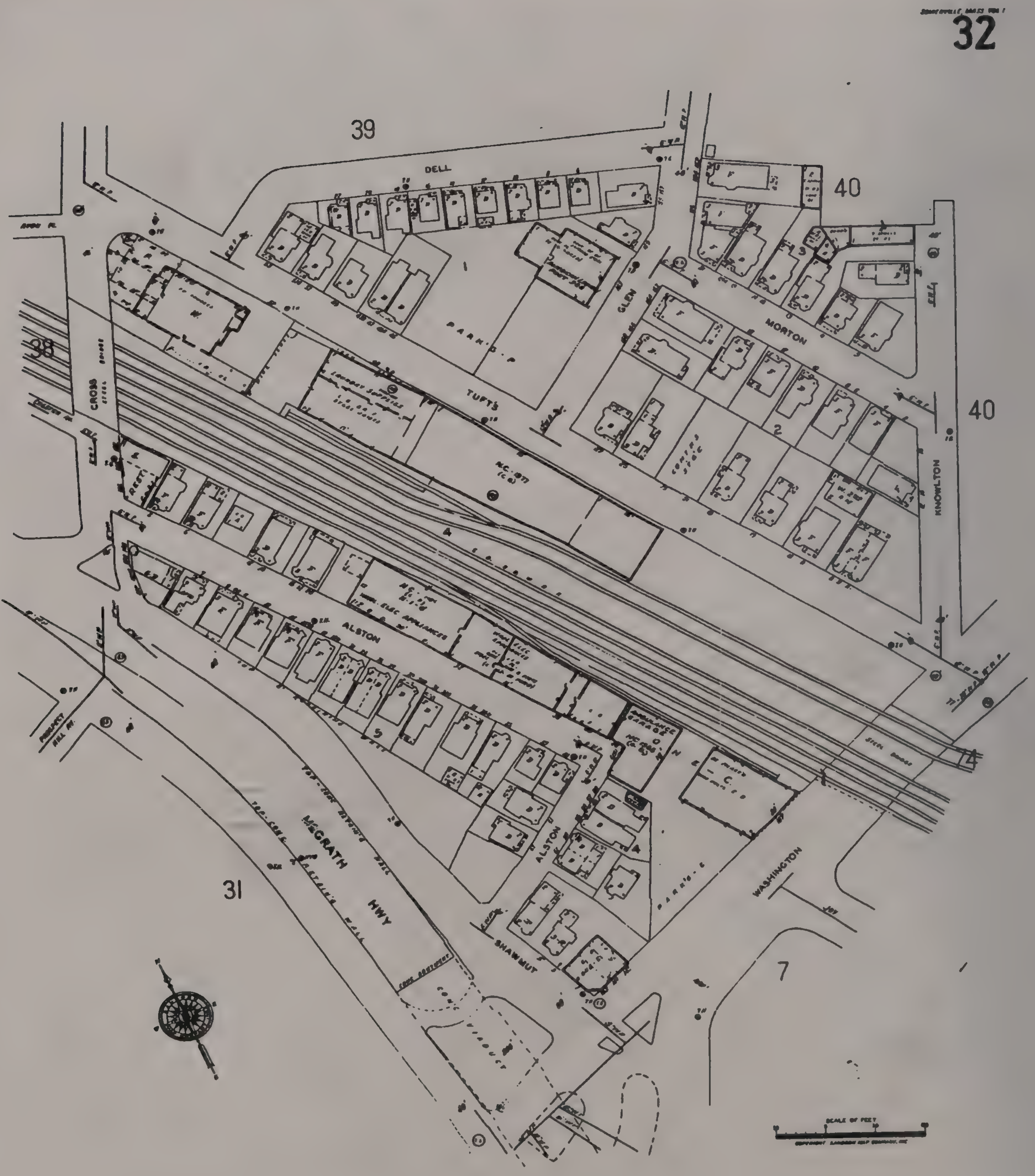

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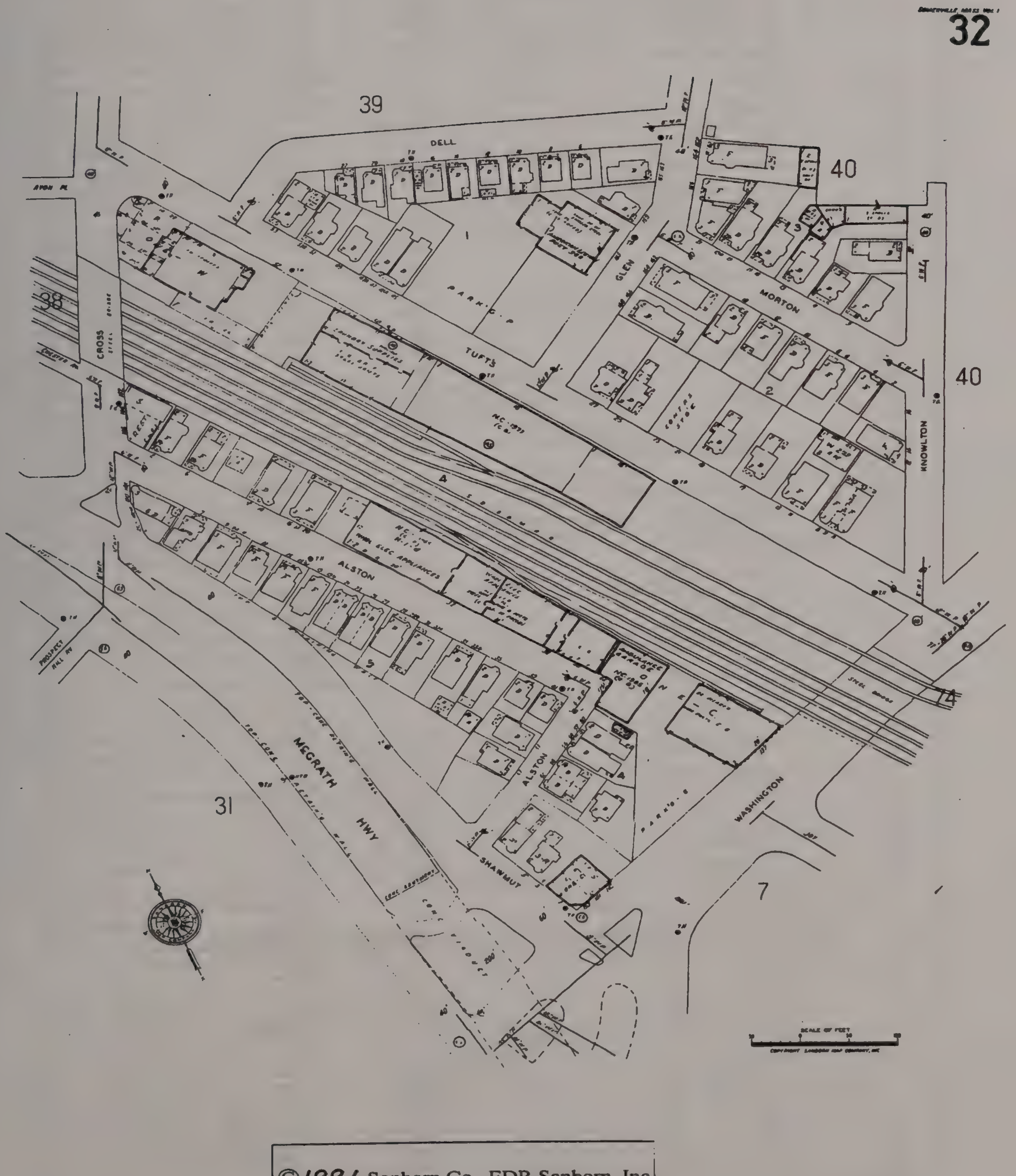

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Sanborn Map Abbreviations

"Linking technology with tradition"®

Abbreviation	Meaning
A	Automobile (usually designates the location of a garage)
A in B	Automobile located in basement
A S	Automatic sprinkler
Abv	Above
ACS	Automatic chemical sprinkler
AFA	Automatic fire alarm
Agr	Agricultural
Appts	Apparatus
Apts	Apartments
Asb Cl	Asbestos clad
Att'd	Attended
Aud'it'm	Auditorium
Auto Ho	Automobile house, or garage
B	Basement, boiler or occasionally brick
B&S	Boots and shoes
BPOE	Benevolent & Protective Order of Elks
B Sm	Blacksmith
B'ld'g	Building
B'lr.	Boiler
B's't	Basement
Bak'y	Bakery
Balc	Balcony
Bap	Baptist
Bbl	Barrel
Bbls	Barrels
BE	Brick enclosed elevator
Bill'ds	Billiards
Bl Sm	Blacksmith
Blk Sm	Blacksmith
Bst	Basement
C B	Cement brick or concrete block construction
C Br	Concrete brick or cement block construction
Cap'cy	Capacity
Carptr	Carpenter
CBET	Concrete enclosed elevator with traps
Chem	Chemical
Chinaw	Chinaware or porcelain
Chine	Chinese
Cl	Clad
Clo	Clothing
Co	Company
Comp	Composition construction (i.e. stucco) or compressor
Conc	Concrete
Conf'y	Confectionary (candy store)
Confec'y	Confectionary (candy store)
Constr'n	Construction
Corp'n	Corporation
D	Dwelling
DH	Double (fire) hydrant
DG	Dry goods
Drs	Doctor's office
Dwg	Dwelling
E	Open elevator
E Fl	Each Floor
El	Electric
Elec	Electrician
Eng	Engine
Ent	Entertainment
Episc'l	Episcopal
ESC	Elevator with self-closing traps
ET	Elevator with traps
Exch	Telephone exchange
Expr	Express (as used to designate a delivery service)
F	Flat (as used to designate a delivery service)
FA	Fire alarm
FE	Fire escape
F Pump	Fire pump
Fill'g Sta	Filling station, or gas station
Fl	Floor
Fr Attic	Frame constructed attic
Frat	Fraternity
Fur	Furnishings
Furn'g	Furnishings
Furne	Furniture
GAR	Grand Army of the Republic
GT	Gasoline tank
Gal	Gallery
Gall	Gallery
Gall'y	Gallery
Gen'l	General (as used to designate a general store)
Gents	Gentlemen's
Greas'g	Greasing
Gro	Grocery or groceries

Abbreviation	Meaning
HPFS	High pressure fire service
H'dw	Hardware
Hack	Hackney or delivery service
Hardw	Hardware
Ho	Hotel or house (as used to designate a warehouse)
Htr	Heater
Hyd	Hydrant
ICRR	Illinois Central Railroad
Imp	Implements
Ins	Insurance
Insts	Instruments
Ir Cl	Iron clad
K of C	Knights of Columbus
Lab	Laboratory
Lodg'g	Lodging
Luth	Lutheran
Luth'n	Lutheran
ME	Methodist Episcopal
Mach'y	Machinery
Mak'r	Maker
Manf'y	Manufactory or factory
Mdse	Merchandise
Mfy	Manufactory or factory
Mill'y	Millinery
Mkg	Making
Mo	Motor
NS	Not sprinklered
OU	Open under
Off	Office
PO	Post office
Paint'g	Painting
Pat Med	Patent medicines
Plumb'g	Plumbing
Print'g	Printing
QH	Quadruple (fire) hydrant
RC	Roman Catholic
R'f	Roof
R'm	Room
Rep	Repair
Rep'g	Repairing
Repos'ry	Repository
Restr't	Restaurant
Rf	Roof
Rm	Room
S	Store
SA	Spark arrestor
S Vac	Store portion of building is vacant
Sal	Saloon
Sky'ts	Skylights
Sm	Smith, as in gunsmith or blacksmith
Sm Ho	Smokehouse
Sp'k'l'rs	Sprinklers
St'ge	Storage
St'y	Story
Sta	Station
Stat'y	Stationery
TH	Triple (fire) hydrant
Tel	Telephone
Tenem'ts	Tenements
TESC	Tile enclosed elevator with self-closing traps
Tinw	Tinware
Trimm'g	Trimming
U	Upright
Up	Upright
VP	Vertical pipe
Vac	Vacant
Ven'd	Veneered
Ven'r'd	Veneered
W	Ware, as in warehouse or wareroom
WC	Water closet or toilet
WG	Wire glass skylights
W Ho	Warehouse
WPA	Works Progress Administration
W'ks	Works
Whol	Wholesale
Wkg	Working
Woodwkg	Woodworking

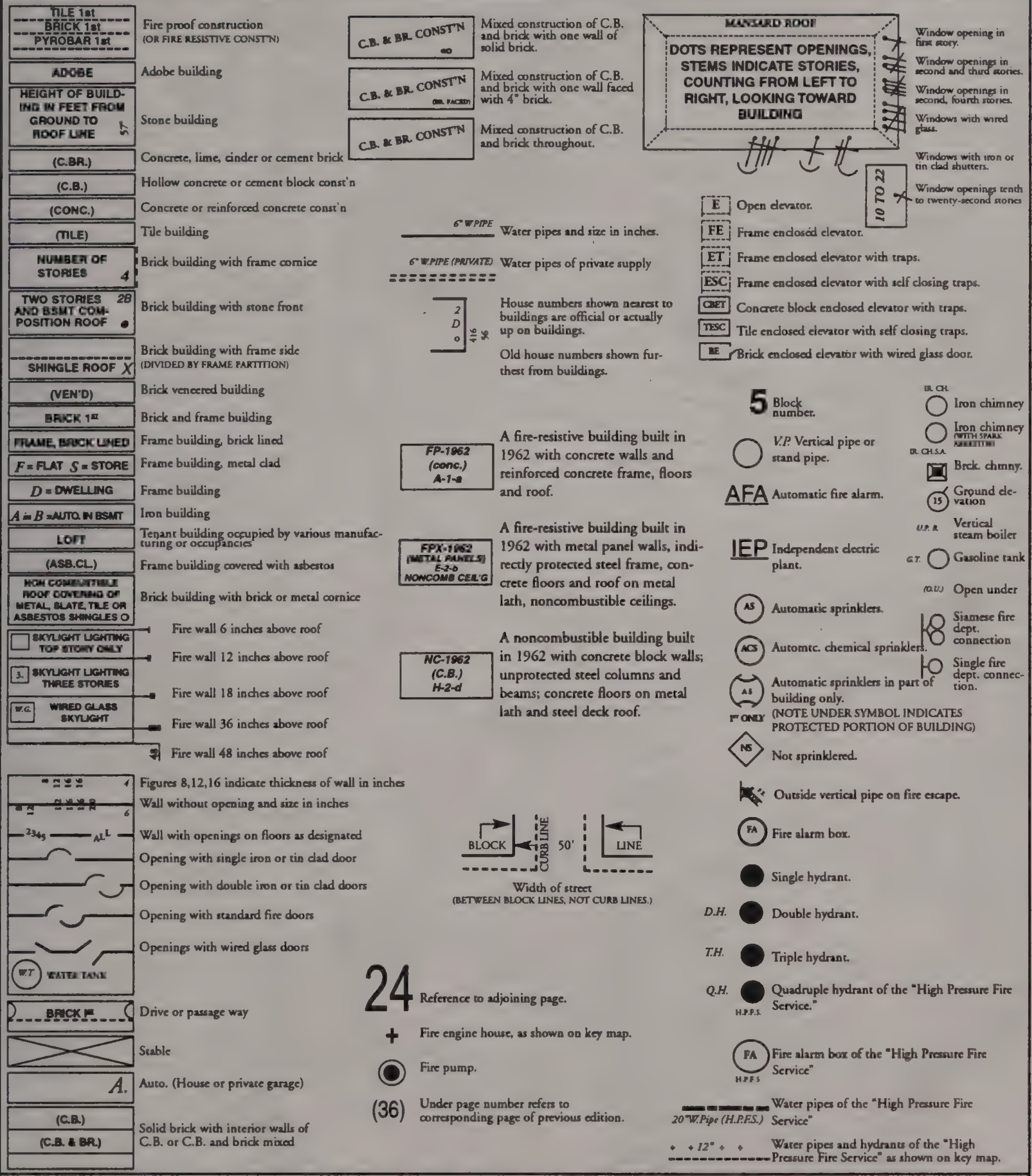
Environmental Data Resources Inc.

The Standard in Environmental Risk Information.

phone: 800.352.0050 • fax: 800.231.6802 • web: www.edrnet.com

Sanborn Map Legend

"Linking technology with tradition"®



Fire proof construction (OR FIRE RESISTIVE CONST'N)

Adobe building

Stone building

Concrete, lime, cinder or cement brick

Hollow concrete or cement block const'n

Concrete or reinforced concrete const'n

Tile building

Brick building with frame cornice

Brick building with stone front

Brick building with frame side (DIVIDED BY FRAME PARTITION)

Brick veneered building

Brick and frame building

Frame building, brick lined

Frame building, metal clad

Frame building

Iron building

Tenant building occupied by various manufacturing or occupancies

Frame building covered with asbestos

Brick building with brick or metal cornice

Fire wall 6 inches above roof

Fire wall 12 inches above roof

Fire wall 18 inches above roof

Fire wall 36 inches above roof

Fire wall 48 inches above roof

Figures 8,12,16 indicate thickness of wall in inches

Wall without opening and size in inches

Wall with openings on floors as designated

Opening with single iron or tin clad door

Opening with double iron or tin clad doors

Opening with standard fire doors

Openings with wired glass doors

Drive or passage way

Stable

Auto. (House or private garage)

Solid brick with interior walls of C.B. or C.B. and brick mixed

Mixed construction of C.B. and brick with one wall of solid brick.

Mixed construction of C.B. and brick with one wall faced with 4" brick.

Mixed construction of C.B. and brick throughout.

Water pipes and size in inches.

Water pipes of private supply

House numbers shown nearest to buildings are official or actually up on buildings.

Old house numbers shown furthest from buildings.

A fire-resistive building built in 1962 with concrete walls and reinforced concrete frame, floors and roof.

A fire-resistive building built in 1962 with metal panel walls, indirectly protected steel frame, concrete floors and roof on metal lath, noncombustible ceilings.

A noncombustible building built in 1962 with concrete block walls; unprotected steel columns and beams; concrete floors on metal lath and steel deck roof.

Width of street (BETWEEN BLOCK LINES, NOT CURB LINES.)

Reference to adjoining page.

Fire engine house, as shown on key map.

Fire pump.

Under page number refers to corresponding page of previous edition.

Window opening in first story.

Window openings in second and third stories.

Window openings in second, fourth stories.

Windows with wired glass.

Windows with iron or tin clad shutters.

Window openings tenth to twenty-second stories

Open elevator.

Frame enclosed elevator.

Frame enclosed elevator with traps.

Frame enclosed elevator with self closing traps.

Concrete block enclosed elevator with traps.

Tile enclosed elevator with self closing traps.

Brick enclosed elevator with wired glass door.

Block number.

Vertical pipe or stand pipe.

Automatic fire alarm.

Independent electric plant.

Automatic sprinklers.

Automtc. chemical sprinklers.

Automatic sprinklers in part of building only. (NOTE UNDER SYMBOL INDICATES PROTECTED PORTION OF BUILDING)

Not sprinklered.

Outside vertical pipe on fire escape.

Fire alarm box.

Single hydrant.

Double hydrant.

Triple hydrant.

Quadruple hydrant of the "High Pressure Fire Service."

Fire alarm box of the "High Pressure Fire Service"

Water pipes of the "High Pressure Fire Service"

Water pipes and hydrants of the "High Pressure Fire Service" as shown on key map.

Iron chimney

Iron chimney (WITH SPARK ARRESTER)

Brck. chmny.

Ground elevation

Vertical steam boiler

Gasoline tank

Open under

Siamese fire dept. connection

Single fire dept. connection.

CODING OF STRUCTURAL UNITS FOR FIREPROOF AND NON-COMBUSTIBLE BUILDINGS

FRAMING

CODE	STRUCTURAL UNIT
A.	Reinforced Concrete Frame.
B.	Reinforced Concrete Joists, Columns, Beams, Trusses, Arches, Masonry Piers.
C.	Protected Steel Frame.
D.	Individually Protected Steel Joists, Columns, Beams, Trusses, Arches.
E.	Indirectly Protected Steel Frame.
F.	Indirectly Protected Steel Joists, Columns, Beams, Trusses, Arches.
G.	Unprotected Steel Frame.
H.	Unprotected Steel Joists, Columns, Beams, Trusses, Arches.
O.	Masonry Bearing Walls.

FLOORS

CODE	STRUCTURAL UNIT
1.	Reinforced Concrete. Reinforced Concrete with Masonry Units. Pre-cast Concrete or Gypsum Slabs or Planks.
2.	Concrete on Metal Lath, Incombustible Form Boards, Paper-backed Wire Fabric, Steel Deck, and Cellular, Ribbed or Corrugated Steel Units.
3.	Open Steel Deck or Grating.

ROOF

CODE	STRUCTURAL UNIT
a.	Reinforced Concrete. Reinforced Concrete with Masonry Units. Reinforced Gypsum Concrete. Pre-cast Concrete or Gypsum Slabs or Planks.
b.	Concrete or Gypsum on Metal Lath, Incombustible Form Boards, Paper-backed Wire Fabric, Steel Deck, and Cellular, Ribbed or Corrugated Steel Units.
c.	Incombustible Composition Boards with or without Insulation. Masonry or Metal Tiles.
d.	Steel Deck, Corrugated Metal or Asbestos Protected Metal with or without Insulation.

The coding for framing, floor and roof structural units as shown above is used in describing the construction of fire-resistive buildings. In addition, reports for fire-resistive buildings will show the date built and wall construction when other than brick.

FP buildings have masonry floors and roof; concrete and/or directly or indirectly protected steel framing; and clay brick, stone or poured concrete walls.

FPX buildings are FP buildings with inferior walls such as concrete block, cement brick, metal or glass panels, etc.

NC buildings have unprotected steel framing and fire-resistive but non-masonry floors and roof.

LAND USE CODE APPLICABLE TO CHANGES DIAGRAMMED AFTER 5/69

R	RESIDENTIAL	M	MANUFACTURING
RT	RESIDENTIAL-TRANSIENT	P	PUBLIC OR INSTITUTIONAL
C	COMMERCIAL	U	UTILITY
W	WAREHOUSE	T	TRANSPORTATION

NUMERICAL PREFIX INDICATES THE NUMBER OF ESTABLISHMENTS IN EACH CATEGORY

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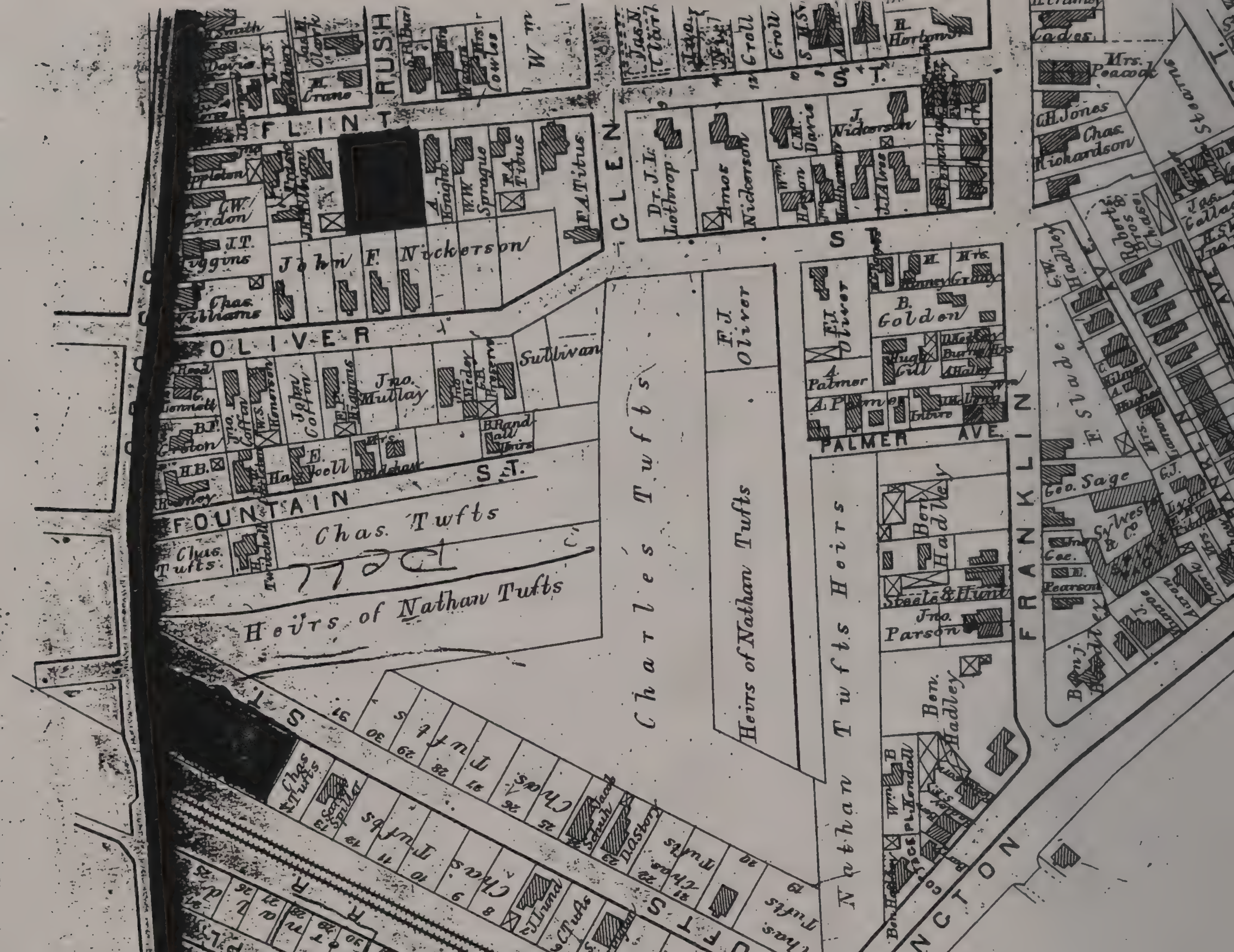
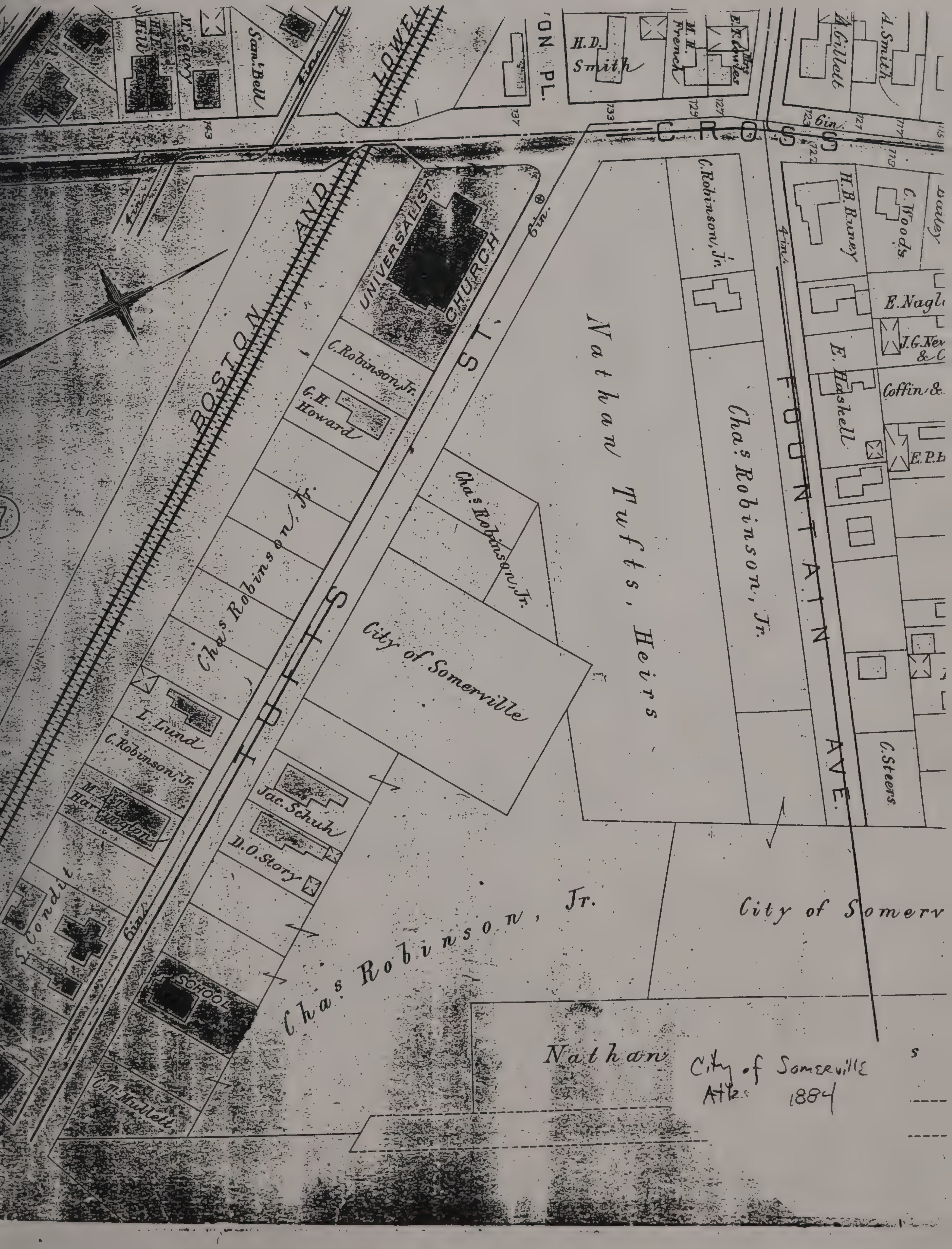
EDR Inc.
800.352.0050
www.edrnet.com



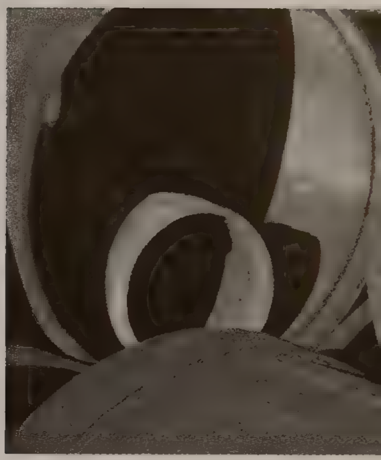
City of Somerville
Atlas - 1874

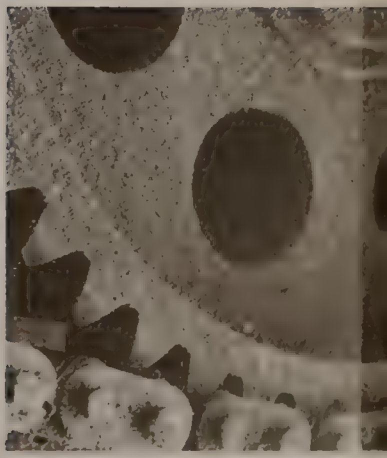


City of Somerville
Atlas 1884

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering





Appendix E

Fire Department Records

FORM NO. 1

City of Somerville Fire Department

SOMERVILLE, MASS.

February 6, 19 81

To: Chief C. J. Donovan

From: Bureau of Fore Prevention

Subject: Superior Products, 50 Tufts Street

The Director of the Board of Health, Paul Murphy; Superintendent of Buildings, Salvatore Caspariello; Building Inspector, Peter Garibotto; Board of Health Inspector, Joseph Palmer; The Manager, Tony Ragusa and I had a meeting at the aforementioned location in reference to a complaint received by the Superintendent of Buildings from Somerville United Neighborhoods (SUN) in a letter dated January 28,1981. This complaint concerns the storage of Hazardous Chemicals.

The following Hazardous Chemicals are stored on the premises:

a) Tetrachloroethylene
b) Trichloroethylene
c) Trichloroethane
d) Perchloroethylene

These chemicals when in contact with fire give off the following toxic gases:

a) Phosgene Gas
b) Chlorine Gas
c) Carbon Monoxide

Therefore I recommend that all personnel in the fire department are allerted to the aforementioned facts and at this location,and in the event of a fire, to connect their water lines into the sprinkler system connection which is located on the Tufts Street side of the building, also they should use their Scott Air-Pacs when ventilation is required and proceed with caution if the determination is made by Chief Officer in charge to enter the building with water lines.

NOTE: Dry cleaning establishments in the city probably use Perchloroethylene.

Respectfully,

Charles A Markey

Charles A. Markey
Deputy Chief
Bureau of Fire Prevention

UNDERGROUND TANK QUESTIONAIRE

PROPERTY ADDRESS: 50 TUFts St.

OWNER ADDRESS: John DANAIS PHONE # 625-7110

Formerly Superior Products

zip

TRADE NAME OF OCCUPANT: PHONE #

if different from own

. . . .

TOTAL GALLONAGE LISTED ON LICENSE : gallons

HOW MANY TANKS (circle one) 1 2 3 4 5 6 7

DATE INSTALLED	TANK TYPE STi-P3 steel fibreglass buffhide	TANK SIZE	PRODUCT/EMPTY
1979	Steel	5,000	Diesel

NOTES: CONTACT PERSON: AL Sospilio

CONTACTED BY : Ron Selig DATE: 12/31/85

SOMERVILLE FIRE DEPARTMENT FIRE PREVENTION BUREAU

[redacted]

ADDRESS # 50 **ADDRESS** Tufts St

OWNER Janis Jaques

OWNER ADDRESS 66 St Marie Ave

OWNER CITY.TOWN Manchester,

OWNER STATE.ZIP NH 03102

OWNER TEL#

BUSINESS NAME John Danais Co.

BUSINESS TEL# OUT OF BUSINESS

PERMIT #

USAGE Chemical Warehouse

OCCUPANCY Commercial

UNDERGROUND TANKS INSTALLED

Install Date	#	Size	Product

UNDERGROUND TANKS REMOVED

Remove Date	#	Size	Product	Inst Date
08-19-87	1	5000	Diesel Fuel	

COMMENTS

BOVEGROUND TANKS:
-14,000 Perchloroithylene Thylene Tank
2-5,000 Gal Tanks-EMPTY Assorted Dry Cleaning Solvents

```
 F1-Help   F2-Edit   F3-Form   F4-Quick Entry

                        UNDERGROUND STORAGE TANKS

   #: 50       ADDRESS: Tufts St                          PERMIT #: 127

 BUSINESS NAME:                                    PHONE:

   UNDERGROUND TANKS INSTALLED                 UNDERGROUND TANKS REMOVED
     DATE     #   SIZE  PRODUCT                DATE     #   SIZE  PRODUCT

 1:                                     1: 08-19-87  1    5000  Diesel Fuel
 2:                                     2:
 3:                                     3:
 4:                                     4:
 5:                                     5:
 6:                                     6:
 7:                                     7:
 8:                                     8:
 9:                                     9:

 AAAAEAAAA1AAAAEAAAA2AAAAEAAAA3AAAAEAAAA4AAAAEAAAA5AAAAEAAAA6AAAAEAAAA7AAAAEAAAA8
 TANKS              Review or edit record 77 (match 3).             Page 1 of 2*
 Esc-Cancel                                                         F10-Continue
```

F.P. 292

✓

The Commonwealth of Massachusetts

Department of Public Safety—Division of Fire Prevention

APPLICATION FOR PERMIT FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

8/19/ 19 87
(Date)

C.82 S.40 M.G.L.

DIG SAFE NUMBER
87342677
Start Date 7/24/87

To: HEAD OF FIRE DEPARTMENT
Somerville
City or Town

In accordance with the provisions of Chapter 148, G.L. as provided in Section 38A Application is hereby made by UNIFIRST CORP
(Name of Person, Firm or Corporation)

50 TUFTS ST SOMERVILLE MA.
Address

For permission to remove and transport underground steel storage tank(s) from

50 TUFTS ST. SOMERVILLE
Street address (city or town)

FDID# 17274 to approved Tank Yard# 149-01 TOMBARLLO.

State clearly type of inert gas used in steel storage tank DRY ICE
Type of inert gas used

1 5000G

Name of Person, Firm, Corporation disposing tank DEMETER INC

Date issued - ~~rejected~~ 8/19/ 1987
Date of expiration till completion 19 paid/due

By:
Signature of Applicant

Crane Service • Equipment Rental • Container Service

James G. Grant Co., Inc.

Rear of 28 Walcott Street
P.O. BOX 54 • READVILLE, MA 02137
(617) 361-2716
FAX (617) 364-1760

Specialists in Plant Liquidation • Dismantling Contractors
Tank Disposal • Installation

Date: December 7, 1990

Chief Emilio Scalesse
266 Broadway
Somerville, MA. 02145

Dear Sir7Madam;

On this day Nov. 30, 1990 the following above ground storage tank(s) 10,000 1500 (2) 2500 were removed from this site Tufts at Somerville. Removal and transportation were provided by James Grant Co.. These tanks were properly and legally disposed of at the James G. Grant Co., Inc. State approved tank yard# 03501.

Sincerely,

Kimberly Grant-Nunes
Kimberly Grant-Nunes

KG

50 Tufts 5F
Above Ground Tanks

[redacted]

YEARLY MAINTENANCE PERMITS
FOR
ABOVE GROUND STORAGE, UNDERGROUND STORAGE, FLAMMABLE STORAGE, GARAGE

ADDRESS: 50 Tufts St

BUS: Chemical Warehouse

NAME: John Danais Company

DIST: 3

FOR THE FOLLOWING		**ISSUED**	**EXPIRES**
ABOVE GROUND STORAGE MAINT PERMIT #:	FEE $:		
UNDERGROUND STORAGE MAINT PERMIT #:	FEE $:		
(NOT LICENSED) FLAMMABLE PERMIT #:	FEE $:		
GARAGE MAIN PERMIT #:	FEE $:		
LUMBER YARD OR MISC. PERMIT #:	FEE $:		

LICENSE & MISC. PERMIT RESTRICTIONS

1. OOB********************
2. OOB********************
3.
4. OOB**************
5. OOB**************
6. CITY LIC F144

ABOVE GROUND RESTRICTIONS

1. 14,000 Perchloroithylene Thylene Tank
2. Normal Capacity 3,000 Gals
3. 2-5,000 Gal Tanks-EMPTY
4. Assorted Dry Cleaning Solvents
5. Approx 25Lbs Bleaching Powder
6.

UNDERGROUND RESTRICTIONS

1.
2.
3.
4.
5.
6.

FLAMMABLE RESTRICTIONS

1. 1-33lb Propane Tank - Forklift
2. 4-Spare 33lb Propane Tanks
3.
4. Warehouse full of 55 Gal Drums of
5. CORROSIVES and OXIDIZERS
6.
7.
8.
9.

GARAGE PERMIT RESTRICTIONS

1. 3 Trucks
2.
3.

OWNER INFORMATION

Name: Janis Jaques
Address: 66 St Marie Ave
City.Town: Manchester,
State.Zip: NH 03102
Tel:
Bus Phone: OUT OF BUSINESS Fax
Person to Fax To:
Contact Person Tel

TENANT INFORMATION

Name:
Address:
City.Town: Manchester
State.Zip: NH 03102
Tel: 1-603-623-4956
Business Phone:
Contact Person: Same
Contact Person Tel:

Other: Daughter Sandy:(cell) 603-486-8780 (603)623-4956

F.P.

CITY OF SOMERVILLE, MASSACHUSETTS

OFFICE OF CHIEF OF FIRE DEPARTMENT

FIRE HEADQUARTERS • 266 BROADWAY • SOMERVILLE, MASSACHUSETTS 02145

EMILIO J. SCALESSE
CHIEF ENGINEER

TEL (617) 623-1700
FAX (617) 625-8101

MARCH 10, 1993

SPECIAL NOTICE

TO THE COMMANDING OFFICER OF ALL STATIONS TO BE READ AT ROLL CALL:

THE JOHN DANAIS COMPANY LOCATED AT 50 TUFTS STREET IS A CHEMICAL STORAGE WAREHOUSE WHICH CONTAINS SUBSTANTIAL QUANTITIES OF HAZARDOUS MATERIALS USED BY THE LAUNDRY AND DRY CLEANING INDUSTRY. THE QUANTITIES OF CHEMICALS KEPT IN STORAGE VARIES DAILY. HOWEVER, THE WAREHOUSE DOES CONTAIN A TANK OF PERCHLORETHYLENE WITH A CAPACITY OF 15,000 GALLONS. THIS CHEMICAL IS TOXIC AND REQUIRES SPECIAL HANDLING PRECAUTIONS.

THE BUILDING IS FULLY SPRINKLERED. THE FIRE DEPARTMENT CONNECTION IS LOCATED NEAR THE MAIN OFFICE ON TUFTS STREET. THIS DISTRIBUTOR UTILIZES RACK STORAGE AND WOODEN PALLETS IN THE WAREHOUSE. A FURNITURE MOVING COMPANY ALSO OCCUPIES SOME SPACE IN THE WAREHOUSE.

COMPANIES OPERATING AT THIS LOCATION DURING FIRES OR SPILLS SHOULD DO SO WITH EXTREME CAUTION. FULL PROTECTIVE GEAR AND S.C.B.A. SHOULD BE WORN AT ALL TIMES. PERSONNEL SHOULD AVOID CONTACT WITH SPILLED MATERIALS OR VAPORS.

GROUP COMMANDERS SHALL HAVE THE COMPANIES FAMILIARIZE THEMSELVES WITH THE BUILDING AND ADJACENT AREA.

RESPECTFULLY,

Emilio J. Scalesse

CHIEF ENGINEER

SEE ATTACHED.

DEPARTMENT OF PUBLIC WORKS
FRANEY ROAD
SOMERVILLE, MASSACHUSETTS 02145
BUILDING DIVISION

Dominic Vitiello
Acting SUPERINTENDENT

ALBERT F. MOCHI
ASST. SUPERINTENDENT
625-6600

David W. Reilly
COMMISSIONER

September 27, 1977

RE: 50 Tufts Street
Interstate Uniform Rental

City Clerk
City Hall
Somerville, Mass.

Dear Sir:

The property located at the above address is in a Business "B" Zone. The use of the premises for a Warehouse, a 14,000 gallon storage tank for non-flamable liquids, which has been approved by the State Building Code Commission, and a 10 horse power motor is permissible if approved by the Board of Aldermen and the Chief Engineer of the Fire Department.

This has been approved by the City of Somerville, Building Division.

Very truly yours,

Dominic Vitiello

Dominic Vitiello,
Acting Superintendent of Buildings

LC/hg

SOMERVILLE FIRE DEPARTMENT FIRE PREVENTION BUREAU

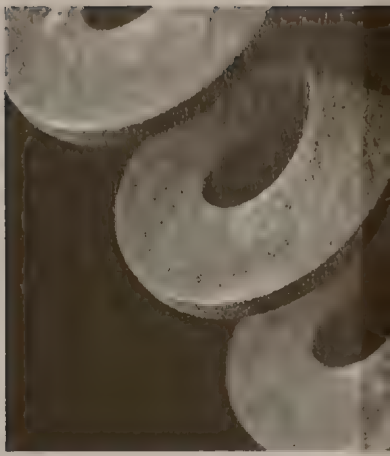
PERMIT PAGE

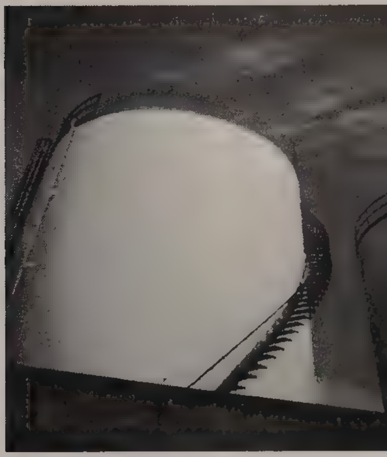
ADDRESS 50 Tufts St **UNIT #** **# OF UNITS**

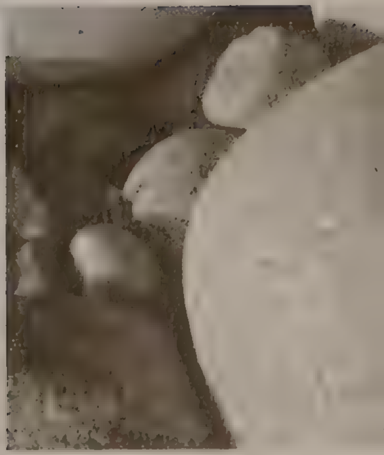
PERMIT TYPE	PERMIT NO.	ISSUE DATE	INSPECTED BY
TANK REMOVAL 5000	05-007	9-1-05	LT MPM

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering







Appendix F

Documentation of Materials and Containers Removed from the Property August – October 2005

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

05419 (X0)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MP2058281080
Manifest Document No.: 09491
2. Page 1: 3 of 3
Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: MA U 109491
B. State Gen ID: MA 4051
C. State Trans. ID: 90 Dfts St Somerville MA
D. Transporter's Phone (617) 8157100
E. State Trans. ID
F. Transporter's Phone ( )
G. State Facility's ID NOT REQUIRED
H. Facility's Phone (401) 781 6340

3. Generator's Name and Mailing Address: Somerville Two LLC So. Portland Pk Suite 400 Portland
4. Generator's Phone (207) 828-1000
5. Transporter 1 Company Name: Fleet Environmental
6. US EPA ID Number
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address: Northland Environmental 275 Allens Ave Providence RI
10. US EPA ID Number

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Waste Paint Related Material UN1263, PG2, Hz 3	1	DF	5	G	D001
b. Waste Corrosive Liquid Basic Inorganic NOS UN3266, PG2, 8	1	DF	30	G	D002
c.					
d.					

J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)
a. 208574
b. 308443 Alkaline
c.
d.

K. Handling Codes for Wastes Listed Above
a. S10
b. S01
c.
d.

15. Special Handling Instructions and Additional Information
For Emergency Call Fleet 888 233-5338

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date Month	Day	Year
John Sammarco		09	31	05

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
Dennis Gow		09	30	05

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

19. Discrepancy Indication Space Section 1. EPA ID # Should be: MAD078281080 Section 6 Should be: MAR000504928 N.A. B. Should be: Part II Section 13 Should be: RID040098352

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month	Day	Year
		[illegible]		

Form approved OMB No. 2050-0039.
EPA Form 8700-22 (Rev. 9-94) Previous editions are obsolete.

In case of emergency or spill, immediately call the National Response Center (800) 424-8802

MA U 109491 COPY>5: TRANSPORTER 1 RETAINS

COPY>5: TRANSPORTER 1 RETAINS

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MP 2078761080

Manifest Document No. 09113

2. Page 1 of 1

Information in the shaded areas is not required by Federal law

A. State Manifest Document Number MA U 109113

B. State Gen ID [illegible]

C. State Trans. ID

D. Transporter's Phone ( ) [illegible]

E. State Trans. ID

F. Transporter's Phone ( )

G. State Facility's ID NOT REQUIRED

H. Facility's Phone (401) 781-[illegible]

3. Generator's Name and Mailing Address
SOMERVILLE II LLC
50 PORTLAND PIER
PORTLAND, ME 04101

4. Generator's Phone ( )

5. Transporter 1 Company Name FLEET ENVIR[illegible]

6. US EPA ID Number [illegible]

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address
NORTHLAND ENVIRONMENTAL INC
275 ALLENS AVE
PROVIDENCE RI

10. US EPA ID Number RID040098352

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE TOXIC LIQUID ORGANIC NOS (CHLOROFORM) 6.1, UN2810, I	001	DM	30	P	U044
b. NON HAZ - NON REGULATED SOLIDS NON RCRA NON DOT	005	DM	1000	P	MA01
c. MASS STATE REGULATED OILY LIQUID	003	DM	65	G	MA98
d. NON HAZ NON REGULATED LIQUID	001	DF	5	G	

J. Additional Descriptions for Materials Listed Above *(include physical state and hazard code.)*

a.

b.

c.

d.

K. Handling Codes for Wastes Listed Above

a.

b.

c.

d.

15. Special Handling Instructions and Additional Information
EMERGENCY CALL - FLEET ENVIR[illegible]

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date Month	Day	Year
J[illegible] IANNACCO	[illegible] IANNACCO	10	07	05

GENERATOR

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
DONALD JONES	Donald Jones	10	07	05

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

TRANSPORTER

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

In case of emergency or spill, immediately call the National Response Center (800) 424-8802.

MA U 109113 COPY>6: GENERATOR MAILS TO DESTINATION STATE

Form approved OMB No. 2050-0039
EPA Form 8700-22 (Rev. 9-94) Previous editions are obsolete

COPY>6: GENERATOR MAILS TO DESTINATION STATE

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

05419

10

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

In case of emergency or spill, immediately call the National Response Center (800) 424-8802

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MAD0538281080
Manifest Document No. 09489
2. Page 1 of 3
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Somerville Two LLC
50 Portland Pier Suite 400
Portland Me
4. Generator's Phone (207) 828-1036

5. Transporter 1 Company Name: Fleet Environmental
6. US EPA ID Number:
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address
Northland Environmental
275 Allens Ave
Providence RI 02905
10. US EPA ID Number RID040098352

A. State Manifest Document Number MA U 109489
B. State Gen ID MA4879
C. State Trans. ID Somerville MA
D. Transporter's Phone ( ) 810-1110
E. State Trans. ID
F. Transporter's Phone ( )
G. State Facility's ID NOT REQUIRED
H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. Waste Sodium Hydroxide Solution UN 1824 PG 2, Hcz 8	2	DF	140	G	D002
b. Waste Sodium Hydroxide Solution UN 1825, PG 2 Hcz 8	4	DF	120	G	D002
c. Waste Sodium Hydroxide Solution UN 1825, PG 2, Hcz 8	1	DF	85	G	D002
d. Waste Hypochlorite Solution UN 1791, PG 2, Hcz 8	8	DF	1,90	G	D001

J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)		K. Handling Codes for Wastes Listed Above	
a. 308661	c. 308161	a. S101	c. S101
b. 308861	d. 308116	b. S101	d. S01

15. Special Handling Instructions and Additional Information
For Emergency Call Fleet 1-888-233-5558

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: John Sammarco
Signature: John Sammarco
Date: Month 08 Day 31 Year 05

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Denis Grow Jr
Signature:
Date: Month 09 Day 01 Year 05

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date: Month Day Year

19. Discrepancy Indication Space Section 6 Should READ: MAR000504928
11A,B,C,D Should be: PG II
Section 1: EPA ID # MAD0538281080

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name:
Signature:
Date: Month Day Year 05

Form approved OMB No. 2050-0039.
EPA Form 8700-22 (Rev. 9-94) Previous editions are obsolete.

MA U 109489 COPY>5: TRANSPORTER 1 RETAINS

COPY>5: TRANSPORTER 1 RETAINS

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

05419

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Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MP203P987080 Manifest Document No. 109490
2. Page 1 of

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number MA U 109490
B. State Gen ID
C. State Trans. ID 50 Tufts St Somerville MA
D. Transporter's Phone ( )
E. State Trans. ID
F. Transporter's Phone ( )
G. State Facility's ID NOT REQUIRED
H. Facility's Phone ( )

3. Generator's Name and Mailing Address
Somerville Two LLC
50 Portland Pier Suite 400
4. Generator's Phone (207) 828-1080
5. Transporter 1 Company Name [illegible] Environmental
6. US EPA ID Number MAD[illegible]
7. Transporter 2 Company Name
8. US EPA ID Number
9. Designated Facility Name and Site Address
Northland Environmental
275 Allens Ave
Providence RI
10. US EPA ID Number RID040098352

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Mass State Reg Oily Liquids None, None, None	09	DM	455	GL	MA98
b. Waste Tetrachloroethylene UN1897 PG3 Hz 6.1	13	DM	715	G	U210
c. Waste Tetrachloroethylene Solid UN1897 PG3 Hz 6.1	2	DM	300	P	U210
d.					

J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)
a.
b. 13D8059
c. 335115
d.

K. Handling Codes for Wastes Listed Above
a. S101
b. S01
c. S101
d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name John Sammarco
Signature John Sammarco
Date Month 08 Day 31 Year 05

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name Dennis M [illegible] Sr
Signature
Date Month 08 Day 31 Year 05

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Year

19. Discrepancy Indication Space 11A + 11B Should READ: Waste Tetrachloroethylene, 6.1, UN1897, PG III

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Date Month 09 Day 01 Year 05

GENERATOR

TRANSPORTER

FACILITY

In case of emergency or spill, immediately call the National Response Center (800) 424-8802

Form approved OMB No. 2050-0039.
EPA Form 8700-22 (Rev. 9-94) Previous editions are obsolete.

MA U 109490 COPY>5: TRANSPORTER 1 RETAINS

COPY>5: TRANSPORTER 1 RETAINS

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

DEP

05419

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MP203828108D
Manifest Document No.: 09492
2. Page 1 of: 2 of 3
Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: MA U 109492
B. State Gen ID: MD 4F519
C. State Trans. ID: 30 TCF15 S1 Somerville Ma
D. Transporter's Phone: ( ) [illegible]
E. State Trans. ID:
F. Transporter's Phone: ( )
G. State Facility's ID: NOT REQUIRED
H. Facility's Phone: ( ) [illegible]

3. Generator's Name and Mailing Address: Somerville Two LLC, 50 Portland P[illegible] Suite 400 Portland
4. Generator's Phone: ( ) [illegible]
5. Transporter 1 Company Name: Fleet Environmental
6. US EPA ID Number:
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: Northland Environmental, 275 Allens Ave, Providence RI
10. US EPA ID Number: RID040098352

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Waste Sodium Hypochlorite Solution UN1791, PG2, Hz 8	5	DF	275	G	D001
b. Waste Tetrachloroethylene UN1897, PG3, Hz 6.1	1	DM	55	G	U210
c. Potassium Hydroxide Solution UN1814, PG2, Hz 8	1	DF	315	G	D002
d. Waste Corrosive Liquid, Acidic, Organic UN3265, PG 2, Hz 8	2	DF	10	G	D002

J. Additional Descriptions for Materials Listed Above *(include physical state and hazard code.)*
a. 3D81162
b. 3D81159
c. 3D81160
d. 3D81158 [illegible] Biocaw

K. Handling Codes for Wastes Listed Above
a. S01
b. S01
c. S01
d. S01

15. Special Handling Instructions and Additional Information
For Emergency Call Fleet 1-888-233-5333

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: John SAMMarco
Signature: Sammarco
Date Month Day Year: 08 31 05

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Denis Grow
Signature:
Date Month Day Year: 08 31 05

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Date Month Day Year:

19. Discrepancy Indication Space: Section 6 Should READ. MAD 0050 [illegible]
11A IC, D - Should be: PG II, 11 B - Should be: PG III
Section 1 - Should be: MA 307 823 108D

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Elaine [illegible]
Signature: [illegible]
Date Month Day Year: 09 02 05

Form approved OMB No. 2050-0039.
EPA Form 8700-22 (Rev. 9-04) Previous editions are obsolete.

In case of emergency or spill, immediately call the National Response Center (800) 424-8802

MA U 109492 COPY>5: TRANSPORTER 1 RETAINS

COPY>5: TRANSPORTER 1 RETAINS

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of

3. Generator's Name and Mailing Address
Somerville Two LLC
50. Portland Pier Suite 400
Portland Me

4. Generator's Phone (207) 828-1080

5. Transporter 1 Company Name: Fleet Environmental

6. US EPA ID Number: MAR000549.28

A. Transporter's Phone: 781-815-1100

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address
Northland Env
275 AllensAve
Providence RI

10. US EPA ID Number: RID040098352

C. Facility's Phone: 401-781-5340

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non DOT or EPA Regulated None None None	001	DM	55	G
b. Non DOT or EPA Regulated Detergent None None None	001	DF	55	G
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

AGENT FOR

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: DENIS M GREW Sr
Signature: Den M Grew
Month 8 Day 31 Year 05

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: DENIS M GREW Sr
Signature: Den M Grew
Month 8 Day 31 Year 05

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name
Signature
Month Day Year

GENERATOR · TRANSPORTER · FACILITY

GENERATOR'S COPY

05419 9 = 30

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. MD960382 81080
Manifest Document No.
2. Page 1 of

3. Generator's Name and Mailing Address
SOMERVILLE TWO LLC
50 PORTLAND PIER SUITE 400
PORTLAND, ME 04101
SOMERVILLE MA.
4. Generator's Phone (207) 832 1086

5. Transporter 1 Company Name FLEET ENVIRONMENTAL SERVICES
6. US EPA ID Number MAD005664906
A. Transporter's Phone 781 315 1106
58519

7. Transporter 2 Company Name
8. US EPA ID Number
B. Transporter's Phone

9. Designated Facility Name and Site Address
NORTHLAND ENVIRONMENTAL
275 ALLENS AVE
PROVIDENCE RI 02905
10. US EPA ID Number RID040098352
C. Facility's Phone 401 781 6346

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. NON DOT NON REGULATED MATERIALS NON NON NON	031	DF	585	G
b. NON DOT NON REGULATED MATERIAL (RCRA EMPTY DRUMS)	16	DM		
c. NON DOT NON REGULATED MATERIAL (RCRA EMPTY DRUMS	5	DF		
d.				

D. Additional Descriptions for Materials Listed Above
(1) DETERGENTS/WATER BASE ADHESIVES
OFF SPECS, OUT OF DATE CLEANERS

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Typed Name AGENT FOR Donald Gomes
Signature Donald Gomes
Month Day Year 08 [illegible] 10

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name DONALD GOMES
Signature Donald Gomes
Month Day Year 08 [illegible] [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Month Day Year

GENERATOR'S COPY

1 B.

STRAIGHT BILL OF LADING-SHORT FORM			825-1
Carrier's Name	ROY BROS	DATE:	August 25, 2005

Received, subject to the classifications and tariffs in effect on the date of issue of this bill of lading, the property described below in apparent good order, subject to all the terms and conditions of the Domestic bill of Lading set forth in the classification or tariff which govern the transportation of the shipment, the property described below in apparent good order, except as noted, marked, consigned, and destined as shown below

Consigned To and destination
UNITED INDUSTRIAL SERVICES
167 MILL STREET
CRANSTON, RI 02905

From:
SOMERVILLE TWO,LLC
50TUFT STREET
SOMERVILLE, MA
C/O South Portland Pier Suite 400
Portland, ME

No Packages	H.M.	Kind of package,Description of Articles, Special Marks, and Eceptions	Weight(lbs)	Class
1 TT	Y. RQ	TETRACHLOROETHYLENE RECYCLED GRADE BULK TT 6.1, UN 1897, PG I I I ERG 160 EMERGENCY RESPONSE CHEMTREC :(800) 424-9300 ON SITE CONTACT; STEVE DOVELL 774-406 0465		6.1

CHARGES ARE TO BE:

PREPAID	YES	C.O.D.	N/A	AMOUNT : To be remitted to SOLOCHEM LLC 86 WATERTOWER PLAZA PMB 301 LEOMINSTER, MA 01453	N/A

TRANSPORTER	Roy Bros Danny Roy
DATE	8-25-05
CONSIGNEE	
DATE	

STRAIGHT BILL OF LADING-SHORT FORM	825-1

Carrier's Name	ROY BROS	DATE:	August 25, 2005

Received, subject to the classifications and tariffs in effect on the date of issue of this bill of lading, the property described below in apparent good order, subject to all the terms and conditions of the Domestic bill of Lading set forth in the classification or tariff which govern the transportation of the shipment. the property described below in apparent good order, except as noted, marked, consigned, and destined as shown below

Consigned To and destination UNITED INDUSTRIAL SERVICES 167 MILL STREET CRANSTON, RI 02905	From: SOMERVILLE TWO,LLC 50TUFT STREET SOMERVILLE, MA C/O South Portland Pier Suite 400 Portland, ME

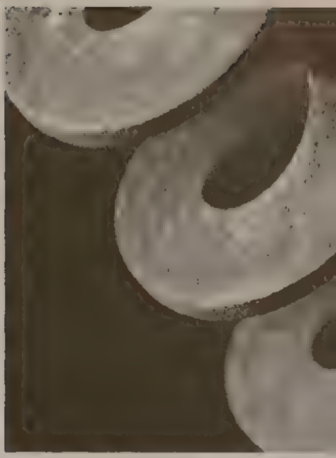
No Packages	H.M.	Kind of package,Description of Articles, Special Marks, and Eceptions	Weight(lbs)	Class
1 TT	Y RQ	TETRACHLOROETHYLENE RECYCLED GRADE BULK TT 6.1, UN 1897, PG III ERG 160 EMERGENCY RESPONSE CHEMTREC :(800) 424-9300 ON SITE CONTACT; STEVE DOVELL 774-406 0465		6.1

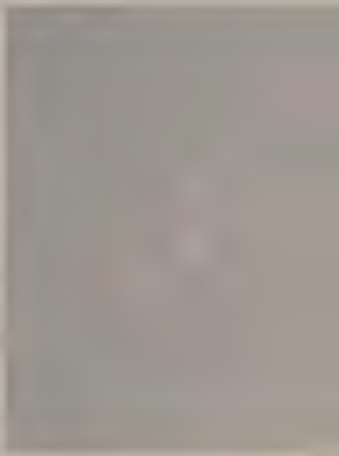
CHARGES ARE TO BE:			
PREPAID	YES	C.O.D. N/A	AMOUNT : N/A To be remitted to SOLOCHEM LLC 86 WATERTOWER PLAZA PMB 301 LEOMINSTER, MA 01453

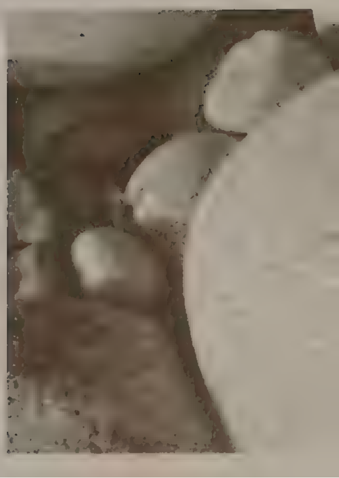
TRANSPORTER	Roy Bros Danny Roy
DATE	8-25-05
CONSIGNEE	
DATE	

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering







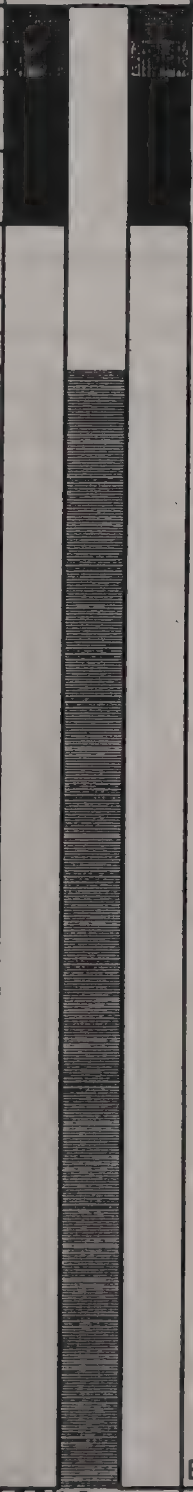
Appendix G

Boring and Monitoring Logs

GEO Insight INC.	**SOIL BORING/ WELL COMPLETION LOG**	**GEO-1**	
		Sheet: 1	Of: 1
	Project: Tufts Street		
	Location: Somerville, MA		

Drilling Co.:	EDI/GeoSearch	Boring Location:	Front Parking Lot
Foreman:	Jeramiah	Ground Surface Elevation:	Datum:
GeoInsight Eng./Geol:	J.M.F.	Date Started: 8/12/2004	Date Completed 8/12/2004

DRILLING METHOD	**SAMPLER**	**GROUND WATER READINGS**			
Vehicle: Auger	Type: Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Hammer(lb): 140	8/12/2004	~13		
Method: Auger					

DEPTH (ft)	SAMPLE NO.	PEN/REC (in)	DEPTH (ft)	BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0		24/21	0-2	17		0-3" Asphalt 3-21" Dry brown fine to medium SAND some Gravel, trace gray fine to medium Sand		25.3	1,2
				33					
				25					
				27					
		24/12	2-4	26		Dry brown fine to medium SAND, trace Gravel		8.7	1
				39					
				31					
				34					
		24/18	4-6	20		Dry brown and red fine to medium SAND, some Gravel		14.4	1
				25					
5				26					
				33					
		22/12	6-8	20		Dry brown and red fine to medium SAND, some Gravel		11.7	1,2
				25					
				75					
				>120					
		0/0	8-10	>175					
10									
15									
16									
17									
18									
19									
20						Boring terminated @ 20'			

GRANULAR SOILS		**COHESIVE SOILS**		**WELL CONSTRUCTION**		**INTERVAL**	**LEGEND**
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY	MATERIAL	TYPE	FEET BGS	
0-4	V. LOOSE	<2	V. SOFT	Concrete		0-.5	■
4-10	LOOSE	2-4	SOFT	Backfill		.5-1	■
10-30	M. DENSE	4-8	M. STIFF	Grout			■
30-50	DENSE	8-15	STIFF	Bentonite		1-3	■
>50	V. DENSE	15-30	V. STIFF	Sandpack		3-20	
		>30	HARD	Riser		0-5	
				Screen		5-20	▨

NOTES:

1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.
2. Sample submitted to Spectrum Analytical Inc. at Agwam, MA for analysis by EPA Method 8260B

GEO Insight INC.	**SOIL BORING/ WELL COMPLETION LOG**	**GEO-2**
		Sheet: 1 Of: 1
	Project: Tufts Street	
	Location: Somerville, MA	

Drilling Co.:	EDI/GeoSearch	Boring Location:	Front Parking Lot
Foreman:	Jeramiah	Ground Surface Elevation:	Datum:
GeoInsight Eng./Geol:	J.M.F.	Date Started:	8/12/2004 Date Completed 8/12/2004

DRILLING METHOD	**SAMPLER**		**GROUND WATER READINGS**			
			DATE	DEPTH	REFERENCE	STABILIZATION
Vehicle: Auger	Type:	Split Spoon				
Model:	Hammer(lb):	140				
Method: Auger						

DEPTH (ft)	SAMPLE NO.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0		24/21	0-2	16		0-1' Dry brown fine to medium SAND			
				21		and gravel			
				22		1-2' Dry brown and red fine to medium		2.6	1
				5		SAND, trace Gravel			
		24/12	2-4	20		Dry brown and red fine to medium		3	1
				18		SAND, trace Gravel			
				22					
				23					
		24/8	4-6	21		0-6" Dry brown fine to medium SAND,		1.9	1
				22		some Gravel			
5				21		6-8" Dry black GRAVEL (asphalt),			
				28		trace Silt.			
		24/18	6-8	45		Dry to moist brown fine to medium SAND,		2.8	1
				32		some black fine to medium Sand, some			
				36		Gravel			
				49					
		5/0	8-10	>125		Moist brown and red fine to medium SAND,		2.3	1
						trace Gravel			
10									
15									
16									
17									
18									
19									
20						Boring terminated @ 20'			

GRANULAR SOILS		**COHESIVE SOILS**	
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY
0-4	V. LOOSE	<2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
>50	V. DENSE	15-30	V. STIFF
		>30	HARD

WELL CONSTRUCTION MATERIAL	TYPE	**INTERVAL** FEET BGS	**LEGEND**
Concrete		0-.5	▨
Backfill		.5-1	■
Grout			■
Bentonite		1-3	■
Sandpack		3-20	⁘
Riser		0-5	
Screen		5-20	▤

NOTES:

1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.

GEO Insight INC.	**SOIL BORING/ WELL COMPLETION LOG**	**GEO-3**
	Project: Tufts Street	Sheet: 1 Of: 1
	Location: Somerville, MA	

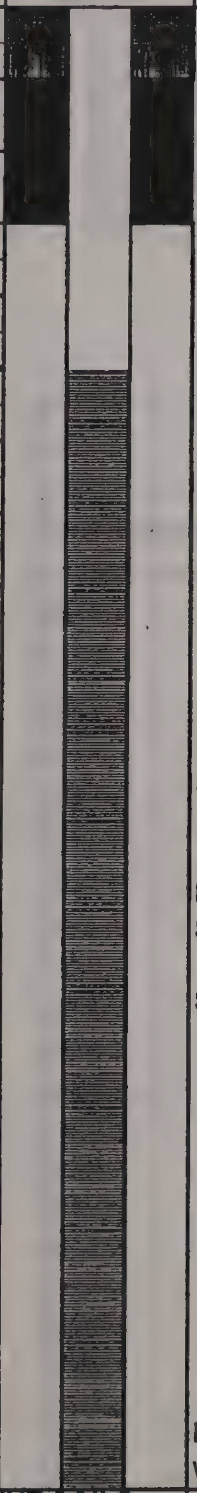
Drilling Co.:	EDI/GeoSearch	Boring Location:	Legion Lot
Foreman:	Pat	Ground Surface Elevation:	Datum:
GeoInsight Eng./Geol:	J.M.F.	Date Started: 8/13/2004	Date Completed 8/13/2004

DRILLING METHOD	SAMPLER
Vehicle: Auger	Type: Split Spoon
Model:	Hammer(lb): 140
Method: Auger	

GROUND WATER READINGS

DATE	DEPTH	REFERENCE	STABILIZATION

DEPTH (ft)	SAMPLE NO.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0			0-7			Dry brown SAND, several large cobbles			
						0-7' Cleared by vac truck			
5									
10		24/12	10-12	12		Moist brown and green fine to medium		0	1
				20		SAND, some Gravel, trace clayley silt			
				20					
				23					
		7/7	12-14	32		Moist brown and red fine to medium		0	1
				>125		SAND, some Gravel, trace green clayley silt			
						Split spoon refusal @ 14'			
15									
16									
17									
18									
19									
						Boring terminated @ 20'			
20						Well Set @ 20'			



GRANULAR SOILS BLOWS/ft.	DENSITY	COHESIVE SOILS BLOWS/ft.	CONSISTENCY
0-4	V. LOOSE	<2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
>50	V. DENSE	15-30	V. STIFF
		>30	HARD

WELL CONSTRUCTION

MATERIAL	TYPE	INTERVAL FEET BGS	LEGEND
Concrete		0-.5	▩
Backfill		.5-1	▩
Grout			■
Bentonite		1-3	■
Sandpack		3-20	
Riser		0-5	
Screen		5-20	▤

NOTES:

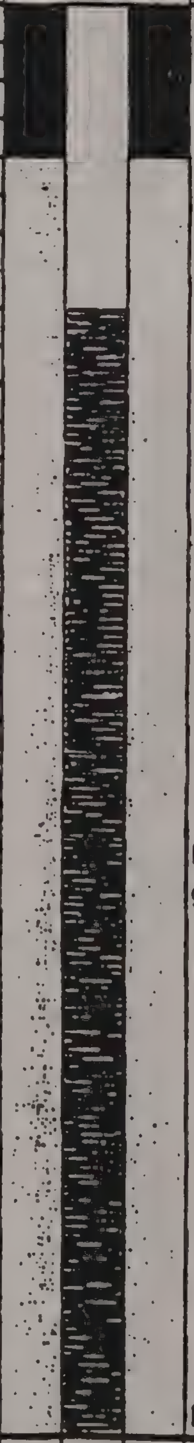
1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.

DRAFT

GEO Insight INC.	SOIL BORING/ WELL COMPLETION LOG	GEO-4
		Sheet: 1 Of: 1
	Project: Tufts Street	
	Location: Somerville, MA	

Drilling Co.:	EDI/GeoSearch	Boring Location:	
Foreman:	Pat	Ground Surface Elevation:	Datum:
GeoInsight Eng./Geol:	J.M.F.	Date Started: 8/13/2004	Date Completed 8/13/2004

DRILLING METHOD	SAMPLER	GROUND WATER READINGS			
Vehicle: Auger	Type: Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Hammer(lb): 140				
Method: Auger					

DEPTH (ft)	SAMPLE NO.	PEN/REC (in)	DEPTH (ft)	BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0						0-7' Cleared by Vac truck			
5									
		15/12	7-11	23		Damp brown fine to medium SAND, trace fine white sand, trace gravel		0	1
				30					
				>125					
10									
			11-13	18		Moist brown fine to medium SAND, some green Clayley Silt, trace black gravel		0	1,2
				23					
				26					
				28					
15									
16									
17									
18						Refusal @ 19'			
19						Well Set @ 19'			
20									

GRANULAR SOILS		COHESIVE SOILS		WELL CONSTRUCTION		INTERVAL	LEGEND
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY	MATERIAL	TYPE	FEET BGS	
0-4	V. LOOSE	<2	V. SOFT	Concrete		0-.5	■
4-10	LOOSE	2-4	SOFT	Backfill		.5-1	■
10-30	M. DENSE	4-8	M. STIFF	Grout			■
30-50	DENSE	8-15	STIFF	Bentonite		1-2	■
>50	V. DENSE	15-30	V. STIFF	Sandpack		3-19	░
		>30	HARD	Riser		0-4	
				Screen		4-19	▤

NOTES:

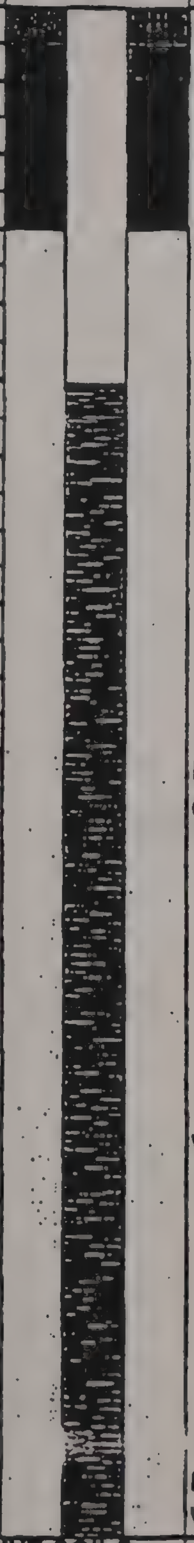
1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.
2. Sample submitted to Spectrum Analytical Inc. at Agwam, MA for analysis by EPA Method 8260B

DRAFT

GEO Insight INC.	SOIL BORING/ WELL COMPLETION LOG	GEO-5
		Sheet: 1 Of: 1
	Project: Tufts Street	
	Location: Somerville, MA	

Drilling Co.: EDI/GeoSearch	Boring Location: 13 Tufts Street
Foreman:	Ground Surface Elevation: Datum:
GeoInsight Eng./Geol: J.M.F.	Date Started: 8/16/2004 Date Completed 8/16/2004

DRILLING METHOD	SAMPLER	GROUND WATER READINGS			
Vehicle: Auger	Type: Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Hammer(lb): 140				
Method: Auger					

DEPTH (ft)	SAMPLE NO.	PEN/REC (In)	DEPTH (ft)	BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0									
5									
10		24/21	10-12	43		Moist fine to medium SAND, brown/green		0	1
				25		Clayley Silt			
				28					
				31					
15		24/12	15-17	28		Wet brown CLAYLEY SILT, some Gravel		3.6	1
				25					
16				22					
				18					
17									
18									
19						Boring terminated @ 20'			
20						Well set @ 20'			

GRANULAR SOILS		COHESIVE SOILS		WELL CONSTRUCTION		INTERVAL	LEGEND
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY	MATERIAL	TYPE	FEET BGS	
0-4	V. LOOSE	<2	V. SOFT	Concrete		0-.5	▓
4-10	LOOSE	2-4	SOFT	Backfill		.5-1	■
10-30	M. DENSE	4-8	M. STIFF	Grout			■
30-50	DENSE	8-15	STIFF	Bentonite		1-3	■
>50	V. DENSE	15-30	V. STIFF	Sandpack		3-20	⋯
		>30	HARD	Riser		0-5	
				Screen		5-20	▤

NOTES:

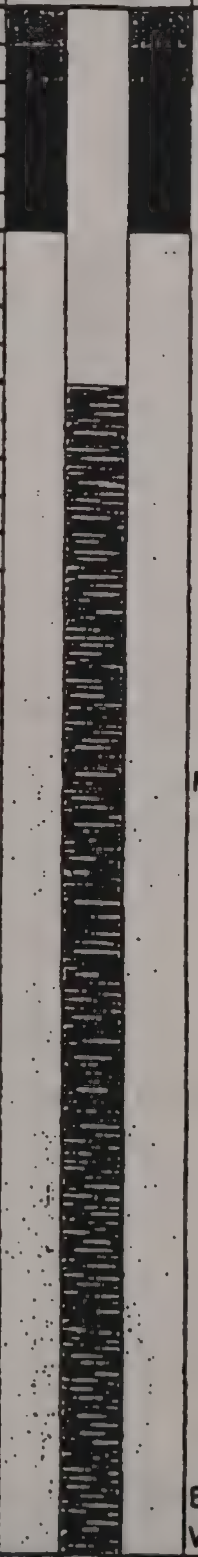
1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.

DRAFT

GeoInsight INC.	SOIL BORING/ WELL COMPLETION LOG	GEO-6
		Sheet: 1 Of: 1
	Project: Tufts Street	
	Location: Somerville, MA	

Drilling Co.:	EDI/GeoSearch	Boring Location:	9 Tufts Street
Foreman:	Pat	Ground Surface Elevation:	Datum:
GeoInsight Eng./Geol:	J.M.F.	Date Started: 8/13/2004	Date Completed 8/13/2004

DRILLING METHOD	SAMPLER	GROUND WATER READINGS			
		DATE	DEPTH	REFERENCE	STABILIZATION
Vehicle: Auger	Type: Split Spoon				
Model:	Hammer(lb): 140				
Method: Auger					



DEPTH (ft)	SAMPLE NO.	PEN/REC (in)	DEPTH (ft)	BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0									
5									
10		24/8	10-12	6		Moist green fine SAND, silt/clay		0	1
				20					
				32					
				30					
		5/0	12-14	>125					
15									
16									
17									
18									
19									
						Boring terminated @ 20'			
20						Well Set @ 20'			

GRANULAR SOILS		COHESIVE SOILS		WELL CONSTRUCTION		INTERVAL	LEGEND
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY	MATERIAL	TYPE	FEET BGS	
0-4	V. LOOSE	<2	V. SOFT	Concrete		0-.5	■
4-10	LOOSE	2-4	SOFT	Backfill		.5-1	■
10-30	M. DENSE	4-8	M. STIFF	Grout			■
30-50	DENSE	8-15	STIFF	Bentonite		1-3	■
>50	V. DENSE	15-30	V. STIFF	Sandpack		3-20	▒
		>30	HARD	Riser		0-5	
				Screen		5-20	▤

NOTES:

1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.

DRAFT

GEO Insight INC.	SOIL BORING/ WELL COMPLETION LOG	GEO-7
		Sheet: 1 Of: 1
	Project: Tufts Street	
	Location: Somerville, MA	

Drilling Co.: EDI/GeoSearch	Boring Location: Rear Parking Lot
Foreman: Donnie	Ground Surface Elevation: Datum:
GeoInsight Eng./Geol: J.M.F.	Date Started: 8/16/2004 Date Completed 8/16/2004

DRILLING METHOD	SAMPLER	GROUND WATER READINGS			
Vehicle: Auger	Type: Split Spoon	DATE	DEPTH	REFERENCE	STABILIZATION
Model:	Hammer(lb): 140				
Method: Auger					

DEPTH (ft)	SAMPLE NO.	PEN/REC (in)	DEPTH (ft)	BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0			0-2					109.4	1
5		24/18	5-7	32		Dry brown fine to medium SAND, trace gravel		49.1	1
				24					
				19					
				18					
		24/12	9-11	20		Damp brown fine to medium SAND, some Gravel, trace dark brown fine to medium sand		15.5	1
				22					
10				36					
				40					
				>125		Refusal @ 13'			
						No well set			
15									
16									
17									
18									
19									
20									

GRANULAR SOILS		COHESIVE SOILS		WELL CONSTRUCTION		INTERVAL	LEGEND
BLOWS/ft.	DENSITY	BLOWS/ft.	CONSISTENCY	MATERIAL	TYPE	FEET BGS	
0-4	V. LOOSE	<2	V. SOFT	Concrete			▓
4-10	LOOSE	2-4	SOFT	Backfill			▓
10-30	M. DENSE	4-8	M. STIFF	Grout			■
30-50	DENSE	8-15	STIFF	Bentonite			■
>50	V. DENSE	15-30	V. STIFF	Sandpack			░
		>30	HARD	Riser			
				Screen			▤

NOTES:

1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.

DRAFT

GEO Insight inc.

SOIL BORING/ WELL COMPLETION LOG

SOIL BORING-1

Project:	Tufts Street	Sheet: 1	Of: 1
Location:	Somerville, MA		

Drilling Co.:	EDI/GeoSearch	Boring Location:	
Foreman:	Jeramiah	Ground Surface Elevation:	Datum:
GeoInsight Eng./Geol:	J.M.F.	Date Started: 8/12/2004	Date Completed 8/12/2004

DRILLING METHOD	SAMPLER	GROUND WATER READINGS			
		DATE	DEPTH	REFERENCE	STABILIZATION
Vehicle: Auger	Type: Split Spoon				
Model:	Hammer(lb): NA				
Method: Auger					

DEPTH (ft)	SAMPLE NO.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0			0-4			Dry dark brown fine to medium SAND and GRAVEL, trace cobble		4.1	1
5		24/9	5-7	12		0-6" Dry dark brown fine to medium SAND, and GRAVEL, trace cobble 6-9" Dry brown fine to medium SAND, trace gravel		1.9	1
				7					
				5					
				5					
		24/12	7-9	23		Dry brown fine to medium SAND, trace gravel, trace brick			
				20					
				24					
				19					
		14/12	9-11	7		Dry to moist fine to medium brown SAND, and GRAVEL		1.9	1
				29					
10				>100					
15									
16									
17									
18									
19									
20									

GRANULAR SOILS BLOWS/ft.	GRANULAR SOILS DENSITY	COHESIVE SOILS BLOWS/ft.	COHESIVE SOILS CONSISTENCY	WELL CONSTRUCTION MATERIAL	WELL CONSTRUCTION TYPE	INTERVAL FEET BGS	LEGEND
0-4	V. LOOSE	<2	V. SOFT	Concrete			▓
4-10	LOOSE	2-4	SOFT	Backfill			▓
10-30	M. DENSE	4-8	M. STIFF	Grout			■
30-50	DENSE	8-15	STIFF	Bentonite			■
>50	V. DENSE	15-30	V. STIFF	Sandpack			░
		>30	HARD	Riser			
				Screen			▤

NOTES:

1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.

DRAFT

GEO Insight INC.

SOIL BORING/ WELL COMPLETION LOG

SOIL BORING-2

Project:	Tufts Street	Sheet: 1	Of: 1
Location:	Somerville, MA		
Drilling Co.:	EDI/GeoSearch	Boring Location:	Rear Parking Lot
Foreman:	Jeramiah	Ground Surface Elevation:	Datum:
GeoInsight Eng./Geol	J.M.F.	Date Started: 8/12/2004	Date Completed 8/12/2004

DRILLING METHOD	SAMPLER	GROUND WATER READINGS			
		DATE	DEPTH	REFERENCE	STABILIZATION
Vehicle: Auger	Type: Split Spoon				
Model:	Hammer(lb): NA				
Method: Auger					

DEPTH (ft)	SAMPLE NO.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	WELL COMPLETION DETAIL	SAMPLE DESCRIPTION	STRATUM DESCRIPTION	FIELD SCREENING (ppm)	NOTE
0			0-2			Dry black fine to course SAND (collected from auger flights)		1.9	1
						0-3 Obstruction augured through			
			2-4			Dry brown GRAVEL, trace fine to medium brown sand (collected from auger flights)		5.2	1
			4-6	6		Dry light brown fine to medium SAND,		0.3	1
				8		trace black fine to medium sand,			
5				7		trace green silt/clay			
				12					
		24/12	6-8	15		Dry brown fine to medium SAND,		0.6	1
				26		some green Clayley Silt			
				42					
				31					
			8-10	6		Dry to damp green CLAYLEY SILT		0	1
				20					
				29					
				32					
10									
15									
16									
17									
18									
19									
20									

GRANULAR SOILS BLOWS/ft.	GRANULAR SOILS DENSITY	COHESIVE SOILS BLOWS/ft.	COHESIVE SOILS CONSISTENCY	WELL CONSTRUCTION MATERIAL	WELL CONSTRUCTION TYPE	INTERVAL FEET BGS	LEGEND
0-4	V. LOOSE	<2	V. SOFT	Concrete			▨
4-10	LOOSE	2-4	SOFT	Backfill			■
10-30	M. DENSE	4-8	M. STIFF	Grout			■
30-50	DENSE	8-15	STIFF	Bentonite			■
>50	V. DENSE	15-30	V. STIFF	Sandpack			░
		>30	HARD	Riser			
				Screen			▤

NOTES:

1. Field screening conducted with Thermo Environmental Industries OVM with an 11.8 eV lamp.

Sanborn, Head & Associates, Inc.
CONSULTING ENGINEERS & SCIENTISTS

Log of Monitoring Well SH-1

Sheet: 1 of 1

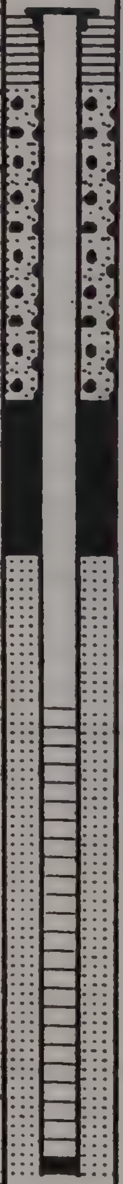
DRAFT

Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Somerville, MA
SHA Project No.: 2170.00
Drilling Method: Geoprobe
Sampling Method: 2" Sleeve
Drilling Company: Environmental Drilling, Inc.
Foreman: J. Chase
Date Started: 6/21/02
Date Finished: 6/21/02
Logged By: M. Regan
Checked By: M. Clark

Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time

Depth (ft)	Casing Blows per ft	Sample Information					Stratum		Geologic Description	Well Diagram	Well Description
		Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Log	Description			
0								—0'— CONCRETE —0.5'—	6" of CONCRETE.		6" Flushmount Curb Box
		S-1A	0-1		48/36	9.3			S-1A: Brown, fine to coarse SAND, little Silt, trace Gravel. Moist.		Concrete Surface Seal (0 to 1')
		S-1B	1-2			452			S-1B: Dark brown, fine to coarse SAND, trace Gravel, trace Silt. Moist.		
2		S-1C	2-3			226			S-1C: Light brown, fine to coarse SAND, little Silt. Moist.		2" Schedule 40 PVC Riser (0 to 9')
		S-1D	3-4			775			S-1D: Dark brown/gray, fine to coarse SAND, little Gravel, trace Silt. Moist.		
4									S-2A: Tan, fine SAND and SILT. Moist.		Formation Material (1 to 5')
		S-2A	4-6		48/98	212					
6									S-2B: Tan, fine to coarse SAND, some Gravel, some Silt. Moist.		Bentonite Seal (5 to 7')
		S-2B	6-8			181		SAND			
8									S-3A: Tan, fine to coarse SAND, some Gravel, some Silt. Moist.		
		S-3A	8-10		48/48	246					
10									S-3B: Tan, SILT & CLAY. Moist.		2" PVC Well Screen (0.01" Slots) (9 to 14')
		S-3B	10-12			399					
12									S-4: Tan, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.		
		S-4	12-14		24/24	2000					
14								—14'—	Refusal at 14 feet. Geoprobe advancement terminated.		
16									NOTES:		
									1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.		
18											
20											
22											
24											

Sanborn, Head & Associates, Inc.
CONSULTING ENGINEERS & SCIENTISTS

Log of Monitoring Well SH-2

Sheet: 1 of 1

DRAFT

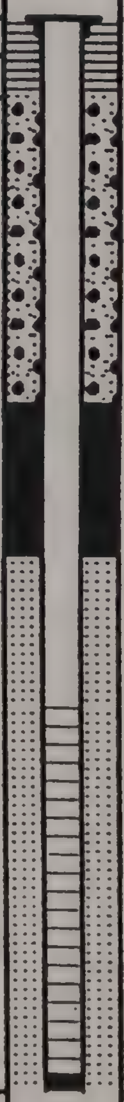
Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Someville, MA
SHA Project No.: 2170.00
Drilling Method: Geoprobe
Sampling Method: 2" Sleeve
Drilling Company: Environmental Drilling, Inc.
Foreman:
Date Started: 6/21/02
Date Finished: 6/21/02
Logged By: M. Regan
Checked By: M. Clark

Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time

Depth (ft)	Casing Blows per ft	Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Stratum Description	Geologic Description	Well Description
0							—0'— CONCRETE —0.5'—	6" of CONCRETE.	6" Flushmount Curb Box
		S-1A	0-1		98/48	65.3		S-1A: Tan, fine to coarse SAND, some Silt. Moist.	Concrete Surface Seal (0 to 1')
2		S-1B	1-4			1552		S-1B: Brown/gray, fine to coarse SAND, some Gravel, some Silt. Moist.	2" Schedule 40 PVC Riser (0 to 9')
4		S-2A	4-5		48/48	2000		S-2A: Gray/black, fine to coarse SAND, little Silt. Moist.	Formation Material (1 to 5')
6		S-2B	5-8			151	SAND	S-2B: Tan/gray, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.	Bentonite Seal (5 to 7')
8								S-3: Tan, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.	
10		S-3	8-12		48/48	234			2" PVC Well Screen (0.01" Slots) (9 to 14')
12		S-4	12-14		24/24	415		S-4: Tan, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.	Filter Sand (7 to 14')
14							—14'—	Refusal at 14 feet. Geoprobe advancement terminated.	
16									
18									
20									
22									
24									



NOTES:

1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.

Sanborn, Head & Associates, Inc.
CONSULTING ENGINEERS & SCIENTISTS

Log of Monitoring Well SH-3

Sheet: 1 of 1

DRAFT

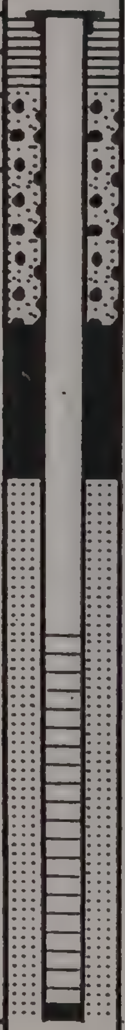
Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Somerville, MA
SHA Project No.: 2170.00
Drilling Method: Geoprobe
Sampling Method: 2" Sleeve
Drilling Company: Environmental Drilling, Inc.
Foreman: J. Chase
Date Started: 6/21/02 **Date Finished:** 6/21/02
Logged By: M. Regan **Checked By:** M. Clark

Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time

Depth (ft)	Casing Blows per ft	Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Log	Stratum Description	Geologic Description	Well Diagram	Well Description
0								0' CONCRETE 0.5'	6" of CONCRETE.		6" Flushmount Curb Box
		S-1A	0-1		48/40	17.5			S-1A: Tan, fine to coarse SAND, little Gravel, little Silt. Moist.		Concrete Surface Seal (0 to 1')
		S-1B	1-2			245			S-1B: Brown, fine to medium SAND, some Silt, little Gravel. Moist.		
2		S-1C	2-3			265			S-1C: Tan, fine to coarse SAND, some Silt, little Gravel. Moist.		2" Schedule 40 PVC Riser (0 to 8')
		S-1D	3-4			956			S-1D: Dark brown, fine SAND & SILT. Moist.		Formation Material (1 to 4')
4									S-2: Tan, fine to coarse SAND, some Silt, little Gravel, little Clay. Moist.		Bentonite Seal (4 to 6')
6		S-2	4-8		48/48	60.2		SAND			
8									S-3: Tan/gray, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.		2" PVC Well Screen (0.01" Slots) (8 to 13')
10		S-3	8-12		48/48	394					Filter Sand (6 to 13')
12		S-4	12-13		12/12	256			S-4: Tan/gray, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.		
								13'			
14									Refusal at 13 feet. Geoprobe advancement terminated.		
16											
18											
20											
22											
24											



NOTES:

1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.

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Log of Monitoring Well SH-4

Sheet: 1 of 1

DRAFT

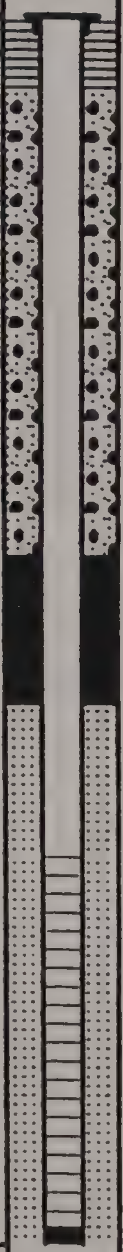
Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Someville, MA
SHA Project No.: 2170.00
Drilling Method: Geoprobe
Sampling Method: 2" Sleeve
Drilling Company: Environmental Drilling, Inc.
Foreman:
Date Started: 6/21/02 Date Finished: 6/21/02
Logged By: M. Regan Checked By: M. Clark

Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time

Depth (ft)	Casing Blows per ft	Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Log	Stratum Description	Geologic Description	Well Description
0								—0'— CONCRETE —0.5'—	6" of CONCRETE.	6" Flushmount Curb Box
		S-1A	0-1		48/48	27.7			S-1A: Light tan, fine to coarse SAND, trace Silt. Moist.	Concrete Surface Seal (0 to 1')
2									S-1B: Tan/gray, fine to coarse SAND, some Silt, little Gravel. Moist.	2" Schedule 40 PVC Riser (0 to 11')
		S-1B	2-4			366				
4									S-2A: Gray/black, fine to coarse SAND, little Silt. Moist.	Formation Material (1 to 7')
									S-2B: Tan/gray, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.	
6		S-2	4-8		48/48	49.5				
8								SAND	S-3: Tan, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.	Bentonite Seal (7 to 9')
10		S-3	8-12		48/48	447				
12									S-4: Tan, fine to coarse SAND, little Gravel, little Silt, little Clay. Moist.	2" PVC Well Screen (0.01" Slots) (11 to 16)
		S-4	12-15.5		40/2	45.1				
14										
										Filter Sand (9 to 16')
16								---16'---	Refusal at 16 feet. Geoprobe advancement terminated.	
18										
20										
22										
24										



NOTES

1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.

2. 2-inch sleeve within Geoprobe stuck. Damaged upon removal. Recovery total unknown.

Sheet: 1 of 1

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Log of Monitoring Well SH-5

DRAFT

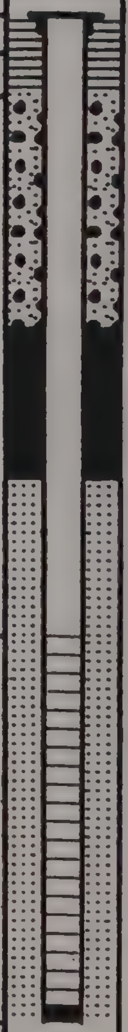
Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Someville, MA
SHA Project No.: 2170.00
Drilling Method: Geoprobe
Sampling Method: 2" Sleeve
Drilling Company: Environmental Drilling, Inc.
Foreman:
Date Started: 6/21/02 Date Finished: 6/21/02
Logged By: M. Regan Checked By: M. Clark

Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time

Depth (ft)	Casing Blows per ft	Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Stratum Description	Geologic Description	Well Description
0							—0'— CONCRETE —0.5'—	6" of CONCRETE.	6" Flushmount Curb Box
		S-1A	0-1		48/40	2.1		S-1A: Tan, fine to coarse SAND, some Gravel, trace Silt. Moist.	Concrete Surface Seal (0 to 1')
2		S-1B	1-4			14.4		S-1B: Brown, fine SAND and SILT, trace Gravel. Moist.	2" Schedule 40 PVC Riser (0 to 8') Formation Material (1 to 4')
4							SAND & SILT	S-2: Dark brown, fine SAND and SILT, trace Gravel. Moist.	Bentonite Seal (4 to 6')
6		S-2.	4-8		48/20	305			
8							—8'—	S-3: Tan/gray, fine to coarse SAND, some Gravel, some Silt, little Clay. Moist.	2" PVC Well Screen (0.01" Slots) (8 to 13')
10		S-3	8-12		48/48	36.7	SAND & GRAVEL		
12		S-4	12-14		24/24	NR	—13'—	S-4: Tan/gray, fine to coarse SAND, some Gravel, some Silt, little Clay. Moist.	Filter Sand (6 to 13')
14								Refusal at 13 feet. Geoprobe advancement terminated.	



NOTES:

1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.

2. NR = Not Recorded

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Log of Boring SH-B1

Sheet: 1 of 1

Ground Elevation:
Datum:

Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Somerville, MA
SHA Project No.: 2170.00
Drilling Method: Geoprobe
Sampling Method: 2" Sleeve
Drilling Company: Environmental Drilling, Inc.
Foreman: J. Chase
Date Started: 6/21/02 Date Finished: 6/21/02
Logged By: Checked By:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time

DRAFT

Depth (ft)	Sample Information					Stratum		Geologic Description	Remarks
	Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Log	Description		
0							—0'—	6" of CONCRETE.	NOTES:
	S-1A	0-1			59.1			S-1A: Light tan, fine to coarse SAND, little Gravel, trace Silt. Moist.	1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.
								S-1B: Tan, fine to coarse SAND, some Silt, some Clay, little Gravel. Moist.	
2	S-1B	1-4			51.3				
4								S-2: Tan/gray, fine to coarse SAND, some Silt, some Clay, trace Gravel. Moist.	2. NR = Not Recorded
6	S-2	4-8			211				
8							SAND & SILT	S-3: Tan/gray, fine to coarse SAND, some Silt, some Clay, trace Gravel. Moist.	
10	S-3	8-12			709				
12								S-4: Tan, fine to medium SAND, some Silt, little Clay. Moist.	
	S-4	12-15			NR				
14									
							—15'—	Refusal at 15 feet. Geoprobe advancement terminated.	
16									
18									
20									
22									
24									

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Log of Boring SH-B2

Sheet: 1 of 1

Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Somerville, MA
SHA Project No.: 2170.00
Drilling Method: Geoprobe
Sampling Method: 2" Sleeve
Drilling Company: Environmental Drilling, Inc.
Foreman: J. Chase
Date Started: 6/21/02 Date Finished: 6/21/02
Logged By: Checked By:

Ground Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time

DRAFT

Depth (ft)	Sample Information					Stratum		Geologic Description	Remarks
	Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Log	Description		
0							—0'— CONCRETE —0.5'—	6" of CONCRETE.	NOTES:
	S-1A	0-3		48/40	436			S-1A: Gray/black, fine to coarse SAND, some Gravel, some Silt. Moist.	1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.
2									
	S-1B	3-4			76.4		SAND	S-1B: Tan, fine to medium SAND, trace Silt. Moist.	
4								S-2A: Tan/gray, fine to coarse SAND, some Silt, some Clay, trace Gravel. Moist.	
	S-2A	4-6		48/24	549				
6							—6'—	S-2B: Tan/gray, fine to coarse SAND, some Gravel, some Silt, little Clay. Moist.	
	S-2B	6-8			19.7		SAND & GRAVEL		
8							—8'—	S-3: Tan/gray, fine to coarse SAND, some Silt, little Gravel, little Clay.	
10	S-3	8-12		48/24	127		SAND & SILT		
12							—12'—	Refusal at 12 feet. Geoprobe advancement terminated.	
14									
16									
18									
20									
22									
24									

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Sheet: 1 of 1

Log of Monitoring Well SH-MW1

DRAFT

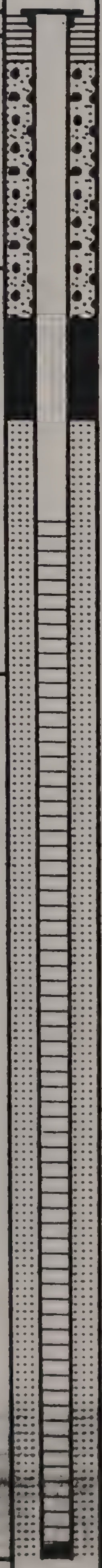
Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Somerville, MA
SHA Project No.: 2170.00
Drilling Method: 6" ID HSA to 13'; 3.5" ID Rock Core Bit
Sampling Method: 2" Split Spoon
Drilling Company: Environmental Drilling, Inc.
Foreman: S. LaMarsh
Date Started: 7/3/02 Date Finished: 7/3/02
Logged By: M. Regan Checked By: M. Clark

Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time
7/8/02	0900	12.86'	PVC		5 Days

Depth (ft)	Casing Blows per ft	Sample Information: Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/Rec (in.)	PID Values (ppm)	Stratum: Log	Description	Geologic Description	Well Diagram	Well Description
0								—0'— ASPHALT —0.2'—	2" of ASPHALT.		6" Flushmount Curb Box Concrete Surface Seal (0 to 1')
		S-1	0-2'			8.1			S-1: Tan/brown, fine to medium SAND, trace Silt. Moist.		
2								SAND			2" Schedule 40 PVC Riser (0 to 10')
4								—5'—			Formation Material (1 to 6')
6		S-2	5-7	11 34 28 28	24/14	ND			S-2: Hard, tan/olive, SILT & CLAY, some coarse to fine Sand, trace Gravel. Moist.		Bentonite Seal (6 to 8')
8								SILT & CLAY			
10		S-3	10-12	12 50 49 45	24/12	2.1			S-3: Hard, tan/olive, SILT & CLAY, some fine to coarse Sand, trace Gravel. Moist.		
12								—13'—	Auger refusal at 13 feet.		
14											
16											
18									NOTES:		2" PVC Well Screen (0.01" Slots) (10 to 30')
20									1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.		
22									2. 3.5" diameter rock-core bit utilized for boring advancement for 13' to 30' below ground suface.		Filter Sand (8 to 30')
24											
26											
28											
30											



Sheet: 1 of 1

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Log of Monitoring Well SH-MW2

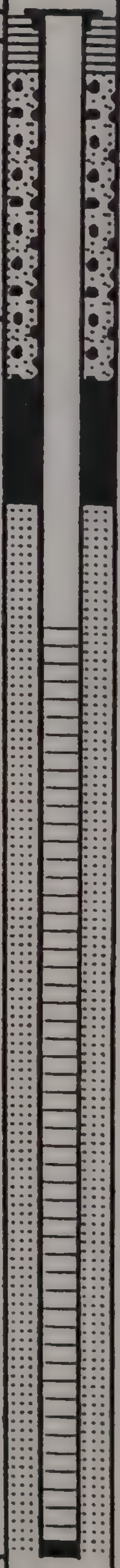
DRAFT

Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Somerville, MA
SHA Project No.: 2179.00
Drilling Method: 6" ID Hollow Stem Auger
Sampling Method: 2" Split Spoon
Drilling Company: Environmental Drilling, Inc.
Foreman: S. LaMarsh
Date Started: 7/3/02 **Date Finished:** 7/3/02
Logged By: M. Regan **Checked By:** M. Clark

Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time
7/8/02	0905	13.20'	PVC		5 Days



Depth (ft)	Casing Blows per ft	Sample No.	Sample Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Stratum Log	Stratum Description	Geologic Description	Well Diagram	Well Description
0								0' ASPHALT 0.2'	2" of ASPHALT.		6" Flushmount Curb Box Concrete Surface Seal (0 to 1')
		S-1	0-2'			25.1			S-1: Dark brown, fine to medium SAND & SILT. Moist.		
2								SAND			2" Schedule 40 PVC Riser (0 to 10')
4											
								5'			Formation Material (1 to 6')
6		S-2	5-7	7 7 9 10	24/12	ND			S-2: Very stiff, tan/olive, SILT & CLAY, some fine to coarse SAND, little Gravel. Moist.		
											Bentonite Seal (6 to 8')
8											
10		S-3	10-10.5	100/6"	6/4	19.0			S-3: Hard, dark brown, SILT & CLAY, little fine to coarse Sand, trace Gravel.		
12											
14								SILT & CLAY			
16		S-4	15-17	26 40 17 20	24/12				S-4: Hard, tan/brown, SILT & CLAY, some fine to coarse Sand, some Gravel. Wet.		2" PVC Well Screen (0.01" Slots) (10 to 25')
18											
20											Filter Sand (8 to 25')
22											
24											
								25'			
26									Boring terminated at 25 feet. No refusal encountered. NOTES: 1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.		
28											
30											

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Log of Monitoring Well SH-MW3

Sheet: 1 of 1

DRAFT

Project: Tufts Street, Somerville, MA
Location: 50 Tufts Street, Somerville, MA
SHA Project No.: 2170.00
Drilling Method: 6" ID Hollow Stem Auger
Sampling Method: 2" Split Spoon
Drilling Company: Environmental Drilling, Inc.
Foreman: S. LaMarsh
Date Started: 7/3/02 **Date Finished:** 7/3/02
Logged By: M. Regan **Checked By:** M. Clark

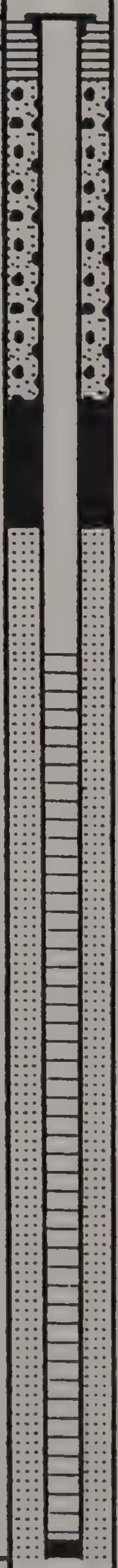
Ground Elevation:
TOC Elevation:
PVC Elevation:
Datum:

Groundwater Readings

Date	Time	Depth to Water	Ref. Pt.	Depth of Casing	Stab. Time
7/8/02	0910	11.60'	PVC		5 Days

Depth (ft)	Casing Blows per ft	Sample No.	Depth (ft)	Spoon Blows per 6"	Pen/ Rec (in.)	PID Values (ppm)	Stratum Description	Geologic Description	Well Description
0							0' ASPHALT 0.2'	2" of ASPHALT.	6" Flushmount Curb Box Concrete Surface Seal (0 to 1')
		S-1	0-2'			3.7		S-1: Tan/brown, SILT & CLAY. Moist.	
2									2" Schedule 40 PVC Riser (0 to 10')
4								S-2: Very stiff, tan/olive, CLAY & SILT. Moist.	Formation Material (1 to 6')
6		S-2	5-7	9 11 15 20	24/16	ND			Bentonite Seal (6 to 8')
8									
10								S-3: Hard, tan/olive, CLAY & SILT. Moist.	
		S-3	10-10.5	17 52 75\4"	16/16	ND			
12							SILT & CLAY		
14								S-4: Hard, tan/olive, CLAY & SILT.	2" PVC Well Screen (0.01" Slots) (10 to 24')
16		S-4	15-17	100\6"	6/6	6.7			
18									
20									Filter Sand (8 to 24')
22									
24							24'	Boring terminated at 24 feet. No refusal encountered.	
26								NOTES: 1. Soil samples were screened for volatile organic compounds (VOCs) using a Photovac Model 2020 Photoionization Detector (PID) with a 10.6 eV lamp calibrated to an isobutylene standard. Typical detection limit is 1 ppm. "ND" is not detected.	
28									
30									

Well Diagram



GEI Consultants

Geotechnical
Environmental and
Water Resources
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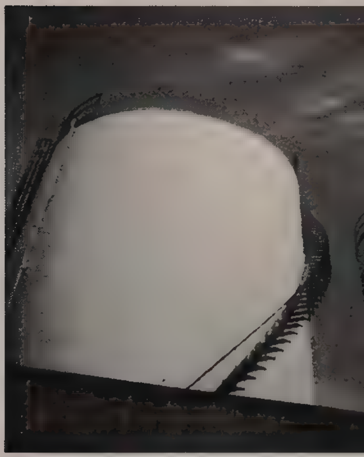

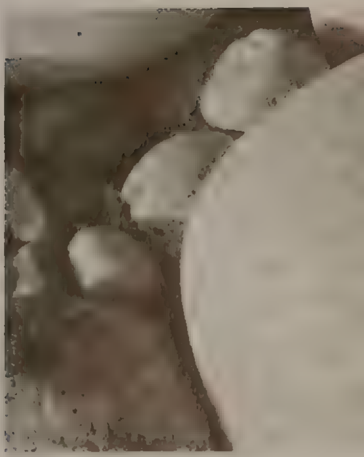

Appendix H

Indoor Air Laboratory Data Reports, Screening Data, and Inventory Logs

RECEIVED OCT 0 1 2004

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client:	Sanborn, Head & Associates, Inc.	**Laboratory Job Number:**	L0410136
Address:	1 Technology Park Drive		
	Westford, MA 01886	**Date Received:**	23-SEP-2004
Attn:	Mr. Duncan Wood	**Date Reported:**	30-SEP-2004
Project Number:	2170.01	**Delivery Method:**	Alpha
Site:	2170.01		

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0410136-01	AS-1	SOMERVILLE, MA

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: James Todaro
This document electronically signed

Laboratory Job Number: L0410136

TO-15

Organic Compounds in Air

In order to comply with various regulatory requirements, the results for the analysis of Organic Compounds in Air by EPA TO-14A or TO-15 are provided in ug/m3 as well as ppbv for each sample in a sequential format.

The LCS % recovery for 1,2,4-trichlorobenzene is above the acceptance criteria for the method. All associated samples are non-detect for this compound.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

Laboratory Sample Number:	L0410136-01 AS-1	**Date Collected:**	21-SEP-2004 17:08
		Date Received :	23-SEP-2004
Sample Matrix:	AIR	**Date Reported :**	30-SEP-2004
Condition of Sample:	Satisfactory	**Field Prep:**	None
Number & Type of Containers:	1-Can		

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organic Compounds in Air - ug/m3				48 TO-15		0925 01:16	PS
1,1,1-Trichloroethane	212.	ug/m3	2.72				
1,1,2,2-Tetrachloroethane	ND	ug/m3	3.43				
1,1,2-Trichloroethane	ND	ug/m3	2.72				
1,1-Dichloroethane	ND	ug/m3	2.02				
1,1-Dichloroethene	7.89	ug/m3	1.98				
1,2,4-Trichlorobenzene	ND	ug/m3	3.71				
1,2,4-Trimethylbenzene	ND	ug/m3	2.46				
1,2-Dibromoethane	ND	ug/m3	3.84				
1,2-Dichlorobenzene	ND	ug/m3	3.00				
1,2-Dichloroethane	ND	ug/m3	2.02				
,2-Dichloropropane	ND	ug/m3	2.31				
,3,5-Trimethylbenzene	ND	ug/m3	2.46				
1,3-Butadiene	ND	ug/m3	1.10				
1,3-Dichlorobenzene	ND	ug/m3	3.00				
1,4-Dichlorobenzene	ND	ug/m3	3.00				
1,4-Dioxane	ND	ug/m3	3.60				
2,2,4-Trimethylpentane	ND	ug/m3	2.33				
2-Butanone	5.45	ug/m3	1.47				
2-Hexanone	ND	ug/m3	2.05				
3-Chloropropene	ND	ug/m3	1.56				
4-Ethyltoluene	ND	ug/m3	2.46				
Acetone	31.0	ug/m3	4.75				
Benzene	1.60	ug/m3	1.60				
Benzyl chloride	ND	ug/m3	2.59				
Bromodichloromethane	ND	ug/m3	3.35				
Bromoform	ND	ug/m3	5.16				
Bromomethane	ND	ug/m3	1.94				
Carbon disulfide	ND	ug/m3	1.56				
Carbon tetrachloride	ND	ug/m3	3.14				
Chlorobenzene	ND	ug/m3	2.30				
Chloroethane	ND	ug/m3	1.32				
Chloroform	3.17	ug/m3	2.44				
Chloromethane	1.61	ug/m3	1.03				
cis-1,2-Dichloroethene	ND	ug/m3	1.98				
cis-1,3-Dichloropropene	ND	ug/m3	2.27				
Cyclohexane	ND	ug/m3	1.72				
Dibromochloromethane	ND	ug/m3	4.26				
Dichlorodifluoromethane	ND	ug/m3	4.94				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

boratory Sample Number: L0410136-01
AS-1

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	ANAL	ID
Volatile Organic Compounds in Air - ug/m3 continued				48 TO-15		0925 01:16	PS
Ethyl Alcohol	55.7	ug/m3	3.76				
Ethyl Acetate	ND	ug/m3	1.80				
Ethylbenzene	ND	ug/m3	2.17				
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/m3	3.83				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ug/m3	3.49				
Hexachlorobutadiene	ND	ug/m3	5.33				
iso-Propyl Alcohol	1.83	ug/m3	1.23				
Methylene chloride	ND	ug/m3	3.47				
4-Methyl-2-pentanone	14.2	ug/m3	2.05				
Methyl tert butyl ether	2.95	ug/m3	1.80				
p/m-Xylene	4.42	ug/m3	2.17				
o-Xylene	ND	ug/m3	2.17				
Heptane	15.8	ug/m3	2.05				
n-Hexane	ND	ug/m3	3.52				
Propylene	ND	ug/m3	1.72				
Styrene	ND	ug/m3	2.13				
Tetrachloroethene	>678	ug/m3	3.39				
Tetrahydrofuran	3.09	ug/m3	1.47				
Toluene	9.44	ug/m3	1.88				
ans-1,2-Dichloroethene	ND	ug/m3	1.98				
rans-1,3-Dichloropropene	ND	ug/m3	2.27				
Trichloroethene	234.	ug/m3	2.68				
Trichlorofluoromethane	ND	ug/m3	2.81				
Vinyl acetate	ND	ug/m3	1.76				
Vinyl bromide	ND	ug/m3	2.18				
Vinyl chloride	ND	ug/m3	1.28				
Volatile Organic Compounds in Air - ug/m3				48 TO-15		0930 00:55	PS
Tetrachloroethene	6290	ug/m3	33.9				
Volatile Organic Compounds in Air - ppbV				48 TO-15		0925 01:16	PS
1,1,1-Trichloroethane	38.9	ppbV	0.500				
1,1,2,2-Tetrachloroethane	ND	ppbV	0.500				
1,1,2-Trichloroethane	ND	ppbV	0.500				
1,1-Dichloroethane	ND	ppbV	0.500				
1,1-Dichloroethene	1.99	ppbV	0.500				
1,2,4-Trichlorobenzene	ND	ppbV	0.500				
1,2,4-Trimethylbenzene	ND	ppbV	0.500				
1,2-Dibromoethane	ND	ppbV	0.500				
1,2-Dichlorobenzene	ND	ppbV	0.500				
1,2-Dichloroethane	ND	ppbV	0.500				
1,2-Dichloropropane	ND	ppbV	0.500				
1,3,5-Trimethylbenzene	ND	ppbV	0.500				
1,3-Butadiene	ND	ppbV	0.500				
1,3-Dichlorobenzene	ND	ppbV	0.500				
1,4-Dichlorobenzene	ND	ppbV	0.500				
1,4-Dioxane	ND	ppbV	1.00				

omments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

boratory Sample Number: L0410136-01
AS-1

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Organic Compounds in Air - ppbV continued				48 TO-15		0925 01:16	PS
2,2,4-Trimethylpentane	ND	ppbV	0.500				
2-Butanone	1.85	ppbV	0.500				
2-Hexanone	ND	ppbV	0.500				
3-Chloropropene	ND	ppbV	0.500				
4-Ethyltoluene	ND	ppbV	0.500				
Acetone	13.1	ppbV	2.00				
Benzene	0.503	ppbV	0.500				
Benzyl chloride	ND	ppbV	0.500				
Bromodichloromethane	ND	ppbV	0.500				
Bromoform	ND	ppbV	0.500				
Bromomethane	ND	ppbV	0.500				
Carbon disulfide	ND	ppbV	0.500				
Carbon tetrachloride	ND	ppbV	0.500				
Chlorobenzene	ND	ppbV	0.500				
Chloroethane	ND	ppbV	0.500				
Chloroform	0.650	ppbV	0.500				
Chloromethane	0.780	ppbV	0.500				
cis-1,2-Dichloroethene	ND	ppbV	0.500				
cis-1,3-Dichloropropene	ND	ppbV	0.500				
Cyclohexane	ND	ppbV	0.500				
Dibromochloromethane	ND	ppbV	0.500				
Dichlorodifluoromethane	ND	ppbV	1.00				
Ethyl Alcohol	29.6	ppbV	2.00				
Ethyl Acetate	ND	ppbV	0.500				
Ethylbenzene	ND	ppbV	0.500				
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ppbV	0.500				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppbV	0.500				
Hexachlorobutadiene	ND	ppbV	0.500				
iso-Propyl Alcohol	0.746	ppbV	0.500				
Methylene chloride	ND	ppbV	1.00				
4-Methyl-2-pentanone	3.47	ppbV	0.500				
Methyl tert butyl ether	0.820	ppbV	0.500				
p/m-Xylene	1.02	ppbV	0.500				
o-Xylene	ND	ppbV	0.500				
Heptane	3.85	ppbV	0.500				
n-Hexane	ND	ppbV	1.00				
Propylene	ND	ppbV	1.00				
Styrene	ND	ppbV	0.500				
Tetrachloroethene	>100	ppbV	.5				
Tetrahydrofuran	1.05	ppbV	0.500				
Toluene	2.51	ppbV	0.500				
trans-1,2-Dichloroethene	ND	ppbV	0.500				
trans-1,3-Dichloropropene	ND	ppbV	0.500				
Trichloroethene	43.5	ppbV	0.500				
Trichlorofluoromethane	ND	ppbV	0.500				
Vinyl acetate	ND	ppbV	0.500				
Vinyl bromide	ND	ppbV	0.500				

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0410136-01
AS-1

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	 ANAL	ID
Volatile Organic Compounds in Air - ppbV continued				48 TO-15		0925 01:16	PS
Vinyl chloride	ND	ppbV	0.500				
Volatile Organic Compounds in Air - ppbV				48 TO-15		0930 00:55	PS
Tetrachloroethene	929.	ppbV	5.00				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0410136

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organic Compounds in Air for sample(s) 01 (L0410136-01, WG181935)					
1,1,1-Trichloroethane	212.	224.	ug/m3	6	25
1,1,2,2-Tetrachloroethane	ND	ND	ug/m3	NC	25
1,1,2-Trichloroethane	ND	ND	ug/m3	NC	25
1,1-Dichloroethane	ND	ND	ug/m3	NC	25
1,1-Dichloroethene	7.89	7.73	ug/m3	2	25
1,2,4-Trichlorobenzene	ND	ND	ug/m3	NC	25
1,2,4-Trimethylbenzene	ND	ND	ug/m3	NC	25
1,2-Dibromoethane	ND	ND	ug/m3	NC	25
1,2-Dichlorobenzene	ND	ND	ug/m3	NC	25
1,2-Dichloroethane	ND	ND	ug/m3	NC	25
1,2-Dichloropropane	ND	ND	ug/m3	NC	25
1,3,5-Trimethylbenzene	ND	ND	ug/m3	NC	25
1,3-Butadiene	ND	ND	ug/m3	NC	25
1,3-Dichlorobenzene	ND	ND	ug/m3	NC	25
1,4-Dichlorobenzene	ND	ND	ug/m3	NC	25
1,4-Dioxane	ND	ND	ug/m3	NC	25
2,2,4-Trimethylpentane	ND	ND	ug/m3	NC	25
2-Butanone	5.45	5.45	ug/m3	0	25
2-Hexanone	ND	ND	ug/m3	NC	25
3-Chloropropene	ND	ND	ug/m3	NC	25
4-Ethyltoluene	ND	ND	ug/m3	NC	25
etone	31.0	27.3	ug/m3	13	25
enzene	1.60	1.76	ug/m3	10	25
Benzyl chloride	ND	ND	ug/m3	NC	25
Bromodichloromethane	ND	ND	ug/m3	NC	25
Bromoform	ND	ND	ug/m3	NC	25
Bromomethane	ND	ND	ug/m3	NC	25
Carbon disulfide	ND	ND	ug/m3	NC	25
Carbon tetrachloride	ND	ND	ug/m3	NC	25
Chlorobenzene	ND	ND	ug/m3	NC	25
Chloroethane	ND	ND	ug/m3	NC	25
Chloroform	3.17	3.10	ug/m3	2	25
Chloromethane	1.61	1.59	ug/m3	1	25
cis-1,2-Dichloroethene	ND	ND	ug/m3	NC	25
cis-1,3-Dichloropropene	ND	ND	ug/m3	NC	25
Cyclohexane	ND	ND	ug/m3	NC	25
Dibromochloromethane	ND	ND	ug/m3	NC	25
Dichlorodifluoromethane	ND	ND	ug/m3	NC	25
Ethyl Alcohol	55.7	63.6	ug/m3	13	25
Ethyl Acetate	ND	ND	ug/m3	NC	25
Ethylbenzene	ND	ND	ug/m3	NC	25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ug/m3	NC	25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ug/m3	NC	25
Hexachlorobutadiene	ND	ND	ug/m3	NC	25
iso-Propyl Alcohol	1.83	2.33	ug/m3	24	25
Methylene chloride	ND	ND	ug/m3	NC	25

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0410136

Continued

Parameter	Value 1	Value 2	Units	RPD	RPD Limits
Volatile Organic Compounds in Air for sample(s) 01 (L0410136-01, WG181935)					
4-Methyl-2-pentanone	14.2	14.7	ug/m3	3	25
Methyl tert butyl ether	2.95	2.91	ug/m3	1	25
p/m-Xylene	4.42	4.20	ug/m3	5	25
o-Xylene	ND	ND	ug/m3	NC	25
Heptane	15.8	16.8	ug/m3	6	25
n-Hexane	ND	ND	ug/m3	NC	25
Propylene	ND	ND	ug/m3	NC	25
Styrene	ND	ND	ug/m3	NC	25
Tetrachloroethene	6290	3310	ug/m3	6	25
Tetrahydrofuran	3.09	2.98	ug/m3	4	25
Toluene	9.44	8.94	ug/m3	5	25
trans-1,2-Dichloroethene	ND	ND	ug/m3	NC	25
trans-1,3-Dichloropropene	ND	ND	ug/m3	NC	25
Trichloroethene	234.	246.	ug/m3	5	25
Trichlorofluoromethane	ND	ND	ug/m3	NC	25
Vinyl acetate	ND	ND	ug/m3	NC	25
Vinyl bromide	ND	ND	ug/m3	NC	25
Vinyl chloride	ND	ND	ug/m3	NC	25

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0410136

Parameter	% Recovery	QC Criteria
Volatile Organic Compounds in Air LCS for sample(s) 01 (WG181935)		
1,1,1-Trichloroethane	87	70-130
1,1,2,2-Tetrachloroethane	94	70-130
1,1,2-Trichloroethane	84	70-130
1,1-Dichloroethane	98	70-130
1,1-Dichloroethene	88	70-130
1,2,4-Trichlorobenzene	131	70-130
1,2,4-Trimethylbenzene	84	70-130
1,2-Dibromoethane	82	70-130
1,2-Dichlorobenzene	82	70-130
1,2-Dichloroethane	99	70-130
1,2-Dichloropropane	86	70-130
1,3,5-Trimethylbenzene	102	70-130
1,3-Butadiene	91	70-130
1,3-Dichlorobenzene	98	70-130
1,4-Dichlorobenzene	104	70-130
1,4-Dioxane	87	70-130
2,2,4-Trimethylpentane	90	70-130
2-Butanone	90	70-130
2-Hexanone	82	70-130
3-Chloropropene	99	70-130
4-Ethyltoluene	75	70-130
Acetone	87	70-130
Benzene	84	70-130
Benzyl chloride	79	70-130
Bromodichloromethane	89	70-130
Bromoform	92	70-130
Bromomethane	85	70-130
Carbon disulfide	93	70-130
Carbon tetrachloride	86	70-130
Chlorobenzene	82	70-130
Chloroethane	85	70-130
Chloroform	84	70-130
Chloromethane	92	70-130
cis-1,2-Dichloroethene	96	70-130
cis-1,3-Dichloropropene	86	70-130
Cyclohexane	81	70-130
Dibromochloromethane	91	70-130
Dichlorodifluoromethane	87	70-130
Ethyl Alcohol	110	70-130
Ethyl Acetate	99	70-130
Ethylbenzene	90	70-130
1,1,2-Trichloro-1,2,2-Trifluoroethane	91	70-130
1,2-Dichloro-1,1,2,2-tetrafluoroethane	86	70-130
Hexachlorobutadiene	128	70-130
iso-Propyl Alcohol	81	70-130
Methylene chloride	109	70-130
4-Methyl-2-pentanone	94	70-130
Methyl tert butyl ether	106	70-130

Laboratory Job Number: L0410136

Continued

Parameter	% Recovery	QC Criteria
Volatile Organic Compounds in Air LCS for sample(s) 01 (WG181935)		
p/m-Xylene	92	70-130
o-Xylene	97	70-130
n-Hexane	92	70-130
Propylene	73	70-130
Styrene	102	70-130
Tetrachloroethene	85	70-130
Tetrahydrofuran	108	70-130
Toluene	94	70-130
trans-1,2-Dichloroethene	93	70-130
trans-1,3-Dichloropropene	91	70-130
Trichloroethene	83	70-130
Trichlorofluoromethane	90	70-130
Vinyl acetate	95	70-130
Vinyl bromide	91	70-130
Vinyl chloride	87	70-130
Volatile Organic Compounds in Air LCS for sample(s) 01 (WG181935)		
Tetrachloroethene	118	70-130

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0410136

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	 ANAL	ID
Blank Analysis for sample(s) 01 (WG181935-3)							
Volatile Organic Compounds in Air - ug/m3				48 TO-15		0924 15:57	PS
1,1,1-Trichloroethane	ND	ug/m3	2.72				
1,1,2,2-Tetrachloroethane	ND	ug/m3	3.43				
1,1,2-Trichloroethane	ND	ug/m3	2.72				
1,1-Dichloroethane	ND	ug/m3	2.02				
1,1-Dichloroethene	ND	ug/m3	1.98				
1,2,4-Trichlorobenzene	ND	ug/m3	3.71				
1,2,4-Trimethylbenzene	ND	ug/m3	2.46				
1,2-Dibromoethane	ND	ug/m3	3.84				
1,2-Dichlorobenzene	ND	ug/m3	3.00				
1,2-Dichloroethane	ND	ug/m3	2.02				
1,2-Dichloropropane	ND	ug/m3	2.31				
1,3,5-Trimethylbenzene	ND	ug/m3	2.46				
1,3-Butadiene	ND	ug/m3	1.10				
1,3-Dichlorobenzene	ND	ug/m3	3.00				
1,4-Dichlorobenzene	ND	ug/m3	3.00				
1,4-Dioxane	ND	ug/m3	3.60				
2,2,4-Trimethylpentane	ND	ug/m3	2.33				
2-Butanone	ND	ug/m3	1.47				
2-Hexanone	ND	ug/m3	2.05				
-Chloropropene	ND	ug/m3	1.56				
4-Ethyltoluene	ND	ug/m3	2.46				
Acetone	ND	ug/m3	4.75				
Benzene	ND	ug/m3	1.60				
Benzyl chloride	ND	ug/m3	2.59				
Bromodichloromethane	ND	ug/m3	3.35				
Bromoform	ND	ug/m3	5.16				
Bromomethane	ND	ug/m3	1.94				
Carbon disulfide	ND	ug/m3	1.56				
Carbon tetrachloride	ND	ug/m3	3.14				
Chlorobenzene	ND	ug/m3	2.30				
Chloroethane	ND	ug/m3	1.32				
Chloroform	ND	ug/m3	2.44				
Chloromethane	ND	ug/m3	1.03				
cis-1,2-Dichloroethene	ND	ug/m3	1.98				
cis-1,3-Dichloropropene	ND	ug/m3	2.27				
Cyclohexane	ND	ug/m3	1.72				
Dibromochloromethane	ND	ug/m3	4.26				
Dichlorodifluoromethane	ND	ug/m3	4.94				
Ethyl Alcohol	ND	ug/m3	3.76				
Ethyl Acetate	ND	ug/m3	1.80				
Ethylbenzene	ND	ug/m3	2.17				
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/m3	3.83				
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ug/m3	3.49				
Hexachlorobutadiene	ND	ug/m3	5.33				
iso-Propyl Alcohol	ND	ug/m3	1.23				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0410136

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	 ANAL	ID
Blank Analysis for sample(s) 01 (WG181935-3)							
Volatile Organic Compounds in Air - ug/m3 continued				48 TO-15		0924 15:57	PS
Methylene chloride	ND	ug/m3	3.47				
4-Methyl-2-pentanone	ND	ug/m3	2.05				
Methyl tert butyl ether	ND	ug/m3	1.80				
p/m-Xylene	ND	ug/m3	2.17				
o-Xylene	ND	ug/m3	2.17				
Heptane	ND	ug/m3	2.05				
n-Hexane	ND	ug/m3	3.52				
Propylene	ND	ug/m3	1.72				
Styrene	ND	ug/m3	2.13				
Tetrachloroethene	ND	ug/m3	3.39				
Tetrahydrofuran	ND	ug/m3	1.47				
Toluene	ND	ug/m3	1.88				
trans-1,2-Dichloroethene	ND	ug/m3	1.98				
trans-1,3-Dichloropropene	ND	ug/m3	2.27				
Trichloroethene	ND	ug/m3	2.68				
Trichlorofluoromethane	ND	ug/m3	2.81				
Vinyl acetate	ND	ug/m3	1.76				
Vinyl bromide	ND	ug/m3	2.18				
Vinyl chloride	ND	ug/m3	1.28				
Blank Analysis for sample(s) 01 (WG181935-3)							
Volatile Organic Compounds in Air - ppbV				48 TO-15		0924 15:57	PS
1,1,1-Trichloroethane	ND	ppbV	0.500				
1,1,2,2-Tetrachloroethane	ND	ppbV	0.500				
1,1,2-Trichloroethane	ND	ppbV	0.500				
1,1-Dichloroethane	ND	ppbV	0.500				
1,1-Dichloroethene	ND	ppbV	0.500				
1,2,4-Trichlorobenzene	ND	ppbV	0.500				
1,2,4-Trimethylbenzene	ND	ppbV	0.500				
1,2-Dibromoethane	ND	ppbV	0.500				
1,2-Dichlorobenzene	ND	ppbV	0.500				
1,2-Dichloroethane	ND	ppbV	0.500				
1,2-Dichloropropane	ND	ppbV	0.500				
1,3,5-Trimethylbenzene	ND	ppbV	0.500				
1,3-Butadiene	ND	ppbV	0.500				
1,3-Dichlorobenzene	ND	ppbV	0.500				
1,4-Dichlorobenzene	ND	ppbV	0.500				
1,4-Dioxane	ND	ppbV	1.00				
2,2,4-Trimethylpentane	ND	ppbV	0.500				
2-Butanone	ND	ppbV	0.500				
2-Hexanone	ND	ppbV	0.500				
3-Chloropropene	ND	ppbV	0.500				
4-Ethyltoluene	ND	ppbV	0.500				
Acetone	ND	ppbV	2.00				
Benzene	ND	ppbV	0.500				
Benzyl chloride	ND	ppbV	0.500				
Bromodichloromethane	ND	ppbV	0.500				

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0410136

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG181935-3)								
Volatile Organic Compounds in Air - ppbV continued				48	TO-15		0924 15:57	PS
Bromoform	ND	ppbV	0.500					
Bromomethane	ND	ppbV	0.500					
Carbon disulfide	ND	ppbV	0.500					
Carbon tetrachloride	ND	ppbV	0.500					
Chlorobenzene	ND	ppbV	0.500					
Chloroethane	ND	ppbV	0.500					
Chloroform	ND	ppbV	0.500					
Chloromethane	ND	ppbV	0.500					
cis-1,2-Dichloroethene	ND	ppbV	0.500					
cis-1,3-Dichloropropene	ND	ppbV	0.500					
Cyclohexane	ND	ppbV	0.500					
Dibromochloromethane	ND	ppbV	0.500					
Dichlorodifluoromethane	ND	ppbV	1.00					
Ethyl Alcohol	ND	ppbV	2.00					
Ethyl Acetate	ND	ppbV	0.500					
Ethylbenzene	ND	ppbV	0.500					
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ppbV	0.500					
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ppbV	0.500					
Hexachlorobutadiene	ND	ppbV	0.500					
iso-Propyl Alcohol	ND	ppbV	0.500					
Methylene chloride	ND	ppbV	1.00					
4-Methyl-2-pentanone	ND	ppbV	0.500					
Methyl tert butyl ether	ND	ppbV	0.500					
p/m-Xylene	ND	ppbV	0.500					
o-Xylene	ND	ppbV	0.500					
Heptane	ND	ppbV	0.500					
n-Hexane	ND	ppbV	1.00					
Propylene	ND	ppbV	1.00					
Styrene	ND	ppbV	0.500					
Tetrachloroethene	ND	ppbV	0.500					
Tetrahydrofuran	ND	ppbV	0.500					
Toluene	ND	ppbV	0.500					
trans-1,2-Dichloroethene	ND	ppbV	0.500					
trans-1,3-Dichloropropene	ND	ppbV	0.500					
Trichloroethene	ND	ppbV	0.500					
Trichlorofluoromethane	ND	ppbV	0.500					
Vinyl acetate	ND	ppbV	0.500					
Vinyl bromide	ND	ppbV	0.500					
Vinyl chloride	ND	ppbV	0.500					
Blank Analysis for sample(s) 01 (WG181935-6)								
Volatile Organic Compounds in Air - ug/m3				48	TO-15		0929 17:50	BS
Tetrachloroethene	ND	ug/m3	3.39					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0410136

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01 (WG181935-6)								
Volatile Organic Compounds in Air - ppbV continued				48	TO-15		0929 17:50	PS
Blank Analysis for sample(s) 01 (WG181935-6)								
Volatile Organic Compounds in Air - ppbV				48	TO-15		0929 17:50	PS
Tetrachloroethene	ND	ppbV	0.500					

REFERENCES

48. Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.
ND	Not detected in comparison to the reported detection limit.

Please note that all solid samples are reported on dry weight basis unless noted otherwise.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

AIR ANALYSIS

CHAIN OF CUSTODY

PAGE 1 OF 1

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Fax: 0987
ail:
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 2170.01
Project Location: Somerville MA
Project #: 2170.01
Project Manager: D. Wood
ALPHA Quote #:

Turn-Around Time

☑ Standard
AIR - 10 DAYS
DISSOLVED GASES - 5 DAYS
☐ RUSH (only confirmed if pre-approved!)
Date Due: 9/30/04 Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client Info
PO #:

Regulatory Requirements/Report Limits

State /Fed	Program	Criteria

Other Project Specific Requirements/Comments:
Reporting Limit: PCE @ 11ug/m^3
TCE @ 5 ug/m^3

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Start Time	Collection End Time	Sample Matrix	Sampler's Initials	ID Can	ID - Flow Controller	TO-14A	TO-15	APH	DISSOLVED GASES	FIXED GASES			Sample Comments	
[illegible]	AS-1	9/2/04	0908	0908	A	MAR	0211	123653 7241745		X							1

Shaded Gray Areas For Lab Use Only

Container Type CS

Relinquished By:	Date/Time	Received By:	Date/Time
			9/23/04 113
	9/23/04 '30		9/23/04 [illegible]

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

Form No: 01-03

Geotechnical
Environmental &
Water Resources
Engineering

GEI Consultants

LETTER OF TRANSMITTAL

1021 Main Street
Winchester, MA 01890-1970
Phone: (781) 721-4000 Fax: (781) 721-4073
www.geiconsultants.com

To: Robert Greetham
Leggat McCall Properties, LLC
10 Post Office Square
[First Street Venture, L.L.C.]
Boston, MA 02109-4601

Date: March 1, 2006
Project No: 03187
Re:

We are sending you the following enclosures:

Quantity	Date	Description
1	1/26/05	Volumes I and II – Release Abatement Measure Status Report No. 1
1	8/1/05	Release Abatement Measure Status Report No. 2
1	1/11/06	Release Abatement Measure Status Report No. 3

These are transmitted as checked below:

☐ For Approval ☒ For Your Use ☐ For Review/Comment ☐ As Requested ☐ Other

Message: If you have any questions, please call me at 781.721.4000.

Copy to: Signed: Pat King

If enclosures are not as noted, kindly notify us at once.

New Jersey
ACCUTEST
Laboratories

03/03/05

RECEIVED
MAR 7 2005
SHAW E & I, INC.

Technical Report for

Shaw E & I, Inc.

MADEP, Tufts Road, Somerville, MA

Accutest Job Number: N91584

Sampling Date: 02/23/05

Report to:

Shaw E & I, Inc.
3 Riverside Drive
Andover, MA 01810

ATTN: Jim Collins

Total number of pages in report: 248

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Sample Summary

Shaw E & I, Inc.

MADEP, Tufts Road, Somerville, MA

Job No: N91584

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
N91584-1	02/23/05	12:34	BS	02/24/05	AIR	Air	IA-1
N91584-2	02/23/05	12:37	BS	02/24/05	AIR	Air	IA-2
N91584-3	02/23/05	12:37	BS	02/24/05	AIR	Air	IA-2D
N91584-4	02/23/05	13:05	BS	02/24/05	AIR	Air	IA-3
N91584-5	02/23/05	13:08	BS	02/24/05	AIR	Air	IA-4
N91584-6	02/23/05	13:50	BS	02/24/05	AIR	Air	IA-5
N91584-7	02/23/05	13:50	BS	02/24/05	AIR	Air	IA-6
N91584-8	02/23/05	14:20	BS	02/24/05	AIR	Air	IA-7
N91584-9	02/23/05	14:23	BS	02/24/05	AIR	Air	IA-8
N91584-10	02/23/05	14:35	BS	02/24/05	AIR	Air	IA-9
N91584-11	02/23/05	14:40	BS	02/24/05	AIR	Air	IA-10

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For
Non-USEPA/CLP Methods

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RESULTS

Report of Analysis

Client Sample ID:	IA-1 11 Tufts St - 1st/Fl		
Lab Sample ID:	N91584-1	**Date Sampled:**	02/23/05
Matrix:	AIR - Air Summa ID: A245	**Date Received:**	02/24/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	**DF**	**Analyzed**	**By**	**Prep Date**	**Prep Batch**	**Analytical Batch**
Run #1	W04884.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	**MW**	**Compound**	**Result**	**RL**	**Units**	**Q**	**Result**	**RL**	**Units**
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.57	0.20	ppbv		2.8	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.48	0.20	ppbv		0.99	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.23	0.20	ppbv		0.80	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.15	0.20	ppbv	J	1.0	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	**Surrogate Recoveries**	**Run# 1**	**Run# 2**	**Limits**
460-00-4	4-Bromofluorobenzene	107%		78-124%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-2 – Basement, 11 Tufts St.		
Lab Sample ID:	N91584-2	**Date Sampled:**	02/23/05
Matrix:	AIR - Air Summa ID: A197	**Date Received:**	02/24/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04889.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.39	0.20	ppbv		0.81	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.29	0.20	ppbv		1.0	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.26	0.20	ppbv		1.8	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-2D - duplicate, basement 11 Tufts St.
Lab Sample ID: N91584-3
Matrix: AIR - Air Summa ID: A312
Method: TO-15
Project: MADEP, Tufts Road, Somerville, MA
Date Sampled: 02/23/05
Date Received: 02/24/05
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04887.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.36	0.20	ppbv		0.74	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.26	0.20	ppbv		0.90	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.28	0.20	ppbv		1.9	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	107%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	IA-3 1st floor, 25 Tufts St.		
Lab Sample ID:	N91584-4	**Date Sampled:**	02/23/05
Matrix:	AIR - Air Summa ID: A248	**Date Received:**	02/24/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04888.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.40	0.20	ppbv		2.0	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.46	0.20	ppbv		0.95	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.10	0.20	ppbv	J	0.35	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	109%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-4 basement, 25 Tufts St		
Lab Sample ID:	N91584-5	**Date Sampled:**	02/23/05
Matrix:	AIR - Air Summa ID: A108	**Date Received:**	02/24/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04886.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.36	0.20	ppbv		0.74	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.14	0.20	ppbv	J	0.49	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.23	0.20	ppbv		1.6	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	108%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-5 - 1st/Fl, 9 Tufts St.		
Lab Sample ID:	N91584-6	**Date Sampled:**	02/23/05
Matrix:	AIR - Air Summa ID: A468	**Date Received:**	02/24/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04890.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.25	0.20	ppbv		1.2	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.49	0.20	ppbv		1.0	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.17	0.20	ppbv	J	0.59	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.27	0.20	ppbv		1.8	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	103%		78-124%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-6 basement, 9 Tufts St		
Lab Sample ID:	N91584-7	**Date Sampled:**	02/23/05
Matrix:	AIR - Air Summa ID: A196	**Date Received:**	02/24/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04891.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.11	0.20	ppbv	J	0.54	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.44	0.20	ppbv		0.91	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.16	0.20	ppbv	J	0.56	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.19	0.20	ppbv	J	1.3	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	108%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID: IA-7 1st fl, 23 Tufts St.
Lab Sample ID: N91584-8 **Date Sampled:** 02/23/05
Matrix: AIR - Air Summa ID: A251 **Date Received:** 02/24/05
Method: TO-15 **Percent Solids:** n/a
Project: MADEP, Tufts Road, Somerville, MA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04892.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.13	0.20	ppbv	J	0.63	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.47	0.20	ppbv		0.97	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.15	0.20	ppbv	J	0.52	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.23	0.20	ppbv		1.6	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	109%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-8 - basement, 23 Tufts St.		
Lab Sample ID:	N91584-9	**Date Sampled:**	02/23/05
Matrix:	AIR - Air Summa ID: A340	**Date Received:**	02/24/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	**DF**	**Analyzed**	**By**	**Prep Date**	**Prep Batch**	**Analytical Batch**
Run #1	W04893.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	**MW**	**Compound**	**Result**	**RL**	**Units**	**Q**	**Result**	**RL**	**Units**
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.18	0.20	ppbv	J	0.88	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.54	0.20	ppbv		1.1	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.14	0.20	ppbv	J	0.49	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.34	0.20	ppbv		2.3	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	**Surrogate Recoveries**	**Run# 1**	**Run# 2**	**Limits**
460-00-4	4-Bromofluorobenzene	107%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: IA-9 1st/Fl, 27 Tufts St.
Lab Sample ID: N91584-10
Matrix: AIR - Air Summa ID: A223
Method: TO-15
Project: MADEP, Tufts Road, Somerville, MA

Date Sampled: 02/23/05
Date Received: 02/24/05
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04894.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.59	0.20	ppbv		1.2	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.15	0.20	ppbv	J	0.52	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: IA-10 basement, 27 Tufts St
Lab Sample ID: N91584-11
Matrix: AIR - Air Summa ID: A469
Method: TO-15
Project: MADEP, Tufts Road, Somerville, MA

Date Sampled: 02/23/05
Date Received: 02/24/05
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W04895.D	1	02/28/05	WG	n/a	n/a	VW212
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.29	0.20	ppbv		0.60	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.14	0.20	ppbv	J	0.49	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	108%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Laboratories

AIR

CHAIN OF CUSTODY

1 of 2

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #
Bottle Order Control #
Accutest Quote #
Accutest Job # N91584

Client / Reporting Information

Company Name: SHAW ENVIRONMENTAL
Address: 3 RIVERSIDE DR
City: ANDOVER State: MA Zip: 01810
Project Contact: Jim Collins E-mail:
Phone #: 978 691 2108
Sampler's Name: BEN SHORT

Project Information

Project Name: TUFTS RD - MADEP
Street: TUFTS RD
City: SOMERVILLE State: MA
Project #:
Fax #:
Client Purchase Order #:

Requested Analysis

8260 ☐ 624 ☐ 8021 ☐ 602 ☐ PA/UG ☐ BTEX ☐ MTBE ☐ TBA ☐ NAP ☐ PA/LG ☐

8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAP ☐ +10 ☐ +15 ☐

8270 ☐ 625 ☐ TCL ☐ PPL ☐ STARS ☐ ABN ☐ BN ☐ PAH ☐ PADF ☐ +TICS ☐

TO-15

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HC	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	TO-15		LAB USE ONLY
-11	IA-10	A469	2/23/05	1440	BS	AIR	1					X				X	w/FC	B.S.

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Turnaround Time (Business Days)

☐ Std. 15 Business Days
☐ 10 Day RUSH
☐ 5 Day RUSH
☒ 3 Day EMERGENCY
☐ 2 Day EMERGENCY
☐ 1 Day EMERGENCY
☐ Other

Approved By: / Date: Verbal Approval

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

☐ Commercial "A"
☐ Commercial B
☒ NJ Reduced
☐ NJ Full
☐ Other ______

☐ FULL CLP
☐ NYASP Category A
☐ NYASP Category B
☐ State Forms
☐ EDD Format

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1 BS
Date Time: 2/23/05 1800
Received by: 1 (UPS Currier)
Relinquished by: 2 UPS
Date Time: 2/24/05 0930
Received by: 2 Todd R Schwendke
Relinquished by: 3
Date Time:
Received by: 3
Relinquished by: 4
Date Time:
Received by: 4
Relinquished by: 5
Date Time:
Received by: 5
Custody Seal #
Preserved where applicable ☐
On Ice ☐
Cooler Temp.

2 of 2

AIR

2of2

ACCUTEST. Laboratories

CHAIN OF CUSTODY

2235 Route 130, Dayton NJ 08810
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www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # 1.91584

Client / Reporting Information

Company Name: SHAW ENVIRONMENTAL
Address: 3 RIVERSIDE DR
City: ANDOVER State: MA Zip: 01810
Project Contact: Jim Collins E-mail:
Phone #: 978 691 2108
Sampler's Name: BEN SHORT

Project Information

Project Name: TUFTS RD - MADEP
Street: TUFTS RD
City: SOMERVILLE State: MA
Project #:
Fax #: 978 691 2108
Client Purchase Order #:

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260 ☐ 624 ☐ 8021 ☐ 602 ☐ PAUG ☐ BTEX ☐ MTBE ☐ TBA ☐ NAP ☐ PALG ☐	8260 ☐ 624 ☐ TCL ☐ PPL ☐ STARS ☐ MTBE ☐ TBA ☐ NAP ☐ +10 ☐ +15 ☐	8270 ☐ 825 ☐ TCL ☐ PPL ☐ STARS ☐ ABN ☐ BN ☐ PAH ☐ PADF ☐ +TICs ☐	TO-15	Requested Analysis	LAB USE ONLY
-1	IA-1	A-245	8/23/05	1234	BS	AIR	1					Y							X	w/Fc	B.S.
-2	IA-2	A197		1237								X							X		
-3	IA-2D	A312		1237								X							X		
-4	IA-3	A-248		1305								X							X		
-5	IA-4	A-108		1308								X							X		
-6	IA-5	A-468		1345								X							X		
-7	IA-6	A-196		1350								X							X		
-8	IA-7	A-251		1420								X							X		
-9	IA-8	A-340		1423								X							X		
-10	IA-9	A-223		1435								X							X		

Matrix Codes

- DW - Drinking Water
- GW - Ground Water
- WW - Water
- SW - Surface Water
- SO - Soil
- SL - Sludge
- OI - Oil
- LIQ - Other Liquid
- AIR - Air
- SOL - Other Solid
- WP - Wipe

Turnaround Time (Business Days)

- ☐ Std. 15 Business Days
- ☐ 10 Day RUSH
- ☐ 5 Day RUSH
- ☒ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ Other

Approved By: / Date: VERBAL APPROVAL

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☒ NJ Reduced
- ☐ NJ Full
- ☐ Other
- ☐ FULL CLP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format

Commercial "A" = Results Only

Comments / Remarks

CLIENT WILL PROVIDE A COMPOUND LIST OF REPORTABLES

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1 BS	Date Time: 8/23 1800	Received by: (UPS Shipment)	Relinquished by: 2 UPS	Date Time: 8/24/05 0930	Received by: 2 Todd R. [illegible]
Relinquished by: 3	Date Time:	Received by: 3	Relinquished by: 4	Date Time:	Received by: 4
Relinquished by: 5	Date Time:	Received by: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp.

2B

1 OF 2.

Internal Sample Tracking Chronicle

Shaw E & I, Inc.

MADEP, Tufts Road, Somerville, MA

Job No: N91584

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
N91584-1 IA-1	Collected: 23-FEB-05 12:34 By: BS		Received: 24-FEB-05 By: TRS			
N91584-1	TO-15	28-FEB-05 13:56	WG			VTO15SL
N91584-2 IA-2	Collected: 23-FEB-05 12:37 By: BS		Received: 24-FEB-05 By: TRS			
N91584-2	TO-15	28-FEB-05 18:26	WG			VTO15SL
N91584-3 IA-2D	Collected: 23-FEB-05 12:37 By: BS		Received: 24-FEB-05 By: TRS			
N91584-3	TO-15	28-FEB-05 16:43	WG			VTO15SL
N91584-4 IA-3	Collected: 23-FEB-05 13:05 By: BS		Received: 24-FEB-05 By: TRS			
N91584-4	TO-15	28-FEB-05 17:35	WG			VTO15SL
N91584-5 IA-4	Collected: 23-FEB-05 13:08 By: BS		Received: 24-FEB-05 By: TRS			
N91584-5	TO-15	28-FEB-05 15:46	WG			VTO15SL
N91584-6 IA-5	Collected: 23-FEB-05 13:50 By: BS		Received: 24-FEB-05 By: TRS			
N91584-6	TO-15	28-FEB-05 19:18	WG			VTO15SL
N91584-7 IA-6	Collected: 23-FEB-05 13:50 By: BS		Received: 24-FEB-05 By: TRS			
N91584-7	TO-15	28-FEB-05 20:10	WG			VTO15SL
N91584-8 IA-7	Collected: 23-FEB-05 14:20 By: BS		Received: 24-FEB-05 By: TRS			
N91584-8	TO-15	28-FEB-05 21:01	WG			VTO15SL

Internal Sample Tracking Chronicle

Shaw E & I, Inc.

MADEP, Tufts Road, Somerville, MA

Job No: N91584

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
N91584-9 IA-8	Collected: 23-FEB-05 14:23 By: BS		Received: 24-FEB-05 By: TRS			
N91584-9	TO-15	28-FEB-05 21:53	WG			VTO15SL
N91584-10 IA-9	Collected: 23-FEB-05 14:35 By: BS		Received: 24-FEB-05 By: TRS			
N91584-10	TO-15	28-FEB-05 22:44	WG			VTO15SL
N91584-11 IA-10	Collected: 23-FEB-05 14:40 By: BS		Received: 24-FEB-05 By: TRS			
N91584-11	TO-15	28-FEB-05 23:36	WG			VTO15SL

GC/MS
VOLATILE

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shaw E & I, Inc.	**Job No**	N91584
Site:	MADEP, Tufts Road, Somerville, MA	**Report Date**	3/3/2005 1:21:00 PM

11 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 02/23/2005 and were received at Accutest on 02/24/2005 properly preserved and intact. These Samples received an Accutest job number of N91584. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method TO-15

Matrix: AIR **Batch ID:** VW212

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) N91584-1DUP were used as the QC samples indicated.
- RPD(s) for Duplicate for Tetrachloroethylene are outside control limits.

The Accutest Laboratories of New Jersey certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NJ, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(N91584).

Accutest Laboratories Annual Method Detection Limit Determination
Dayton, NJ Facility

Method:	T,O-15 (VTO14/15)	**Matrix:**	AIR
Instrument(s):	GCMS2W, GCMSW	**Quant Factor:**	1.00
Analyst:	Pooled	**Study Period:**	October,2004

			Replicate Spikes											
Cmpd./Element/Parm. Name	Analysis Date	Spike ppbv	R1 ppbv	R2 ppbv	R3 ppbv	R4 ppbv	R5 ppbv	R6 ppbv	R7 ppbv	X-Bar ppbv	X-Bar %Recov.	STD.Dev. ppbv	MDL	Spike/MDL Ratio
Acetone	18-Oct-04	0.2	0.23	0.25	0.22	0.19	0.23	0.21	0.15	0.21	105.87	0.03	0.10	1.92
1,3-Butadiene	18-Oct-04	0.2	0.25	0.27	0.26	0.22	0.25	0.26	0.16	0.24	118.70	0.04	0.11	1.78
Benzene	18-Oct-04	0.2	0.17	0.17	0.18	0.15	0.16	0.15	0.10	0.16	78.29	0.03	0.08	2.54
Bromodichloromethane	18-Oct-04	0.2	0.15	0.15	0.17	0.12	0.15	0.14	0.09	0.14	69.49	0.02	0.08	2.65
Bromoform	18-Oct-04	0.2	0.14	0.14	0.13	0.11	0.13	0.12	0.08	0.12	61.48	0.02	0.07	3.02
Bromomethane	18-Oct-04	0.2	0.22	0.23	0.22	0.18	0.21	0.21	0.14	0.20	101.24	0.03	0.10	2.03
Bromoethene	18-Oct-04	0.2	0.21	0.21	0.20	0.17	0.20	0.19	0.12	0.19	93.13	0.03	0.10	2.04
Benzyl Chloride	18-Oct-04	0.2	0.18	0.18	0.17	0.15	0.17	0.16	0.11	0.16	80.68	0.03	0.09	2.32
Carbon disulfide	18-Oct-04	0.2	0.23	0.24	0.23	0.19	0.23	0.22	0.16	0.21	106.80	0.03	0.09	2.15
Chlorobenzene	18-Oct-04	0.2	0.20	0.19	0.19	0.16	0.19	0.18	0.12	0.17	87.45	0.03	0.09	2.28
Chloroethane	18-Oct-04	0.2	0.23	0.24	0.23	0.19	0.23	0.21	0.14	0.21	104.13	0.03	0.11	1.87
Chloroform	18-Oct-04	0.2	0.19	0.20	0.18	0.16	0.19	0.18	0.12	0.17	87.27	0.03	0.09	2.33
Chloromethane	18-Oct-04	0.2	0.27	0.29	0.29	0.25	0.28	0.28	0.19	0.26	131.84	0.04	0.11	1.81
3-Chloropropene	18-Oct-04	0.2	0.19	0.20	0.17	0.15	0.18	0.17	0.11	0.17	83.28	0.03	0.09	2.25
2-Chlorotoluene	18-Oct-04	0.2	0.20	0.20	0.19	0.17	0.19	0.18	0.11	0.18	87.69	0.03	0.09	2.19
Carbon tetrachloride	18-Oct-04	0.2	0.17	0.16	0.16	0.13	0.15	0.15	0.10	0.15	73.04	0.02	0.07	2.71
Cyclohexane	18-Oct-04	0.2	0.21	0.22	0.21	0.17	0.20	0.20	0.14	0.19	96.34	0.03	0.09	2.27
1,1-Dichloroethane	18-Oct-04	0.2	0.21	0.21	0.20	0.17	0.21	0.19	0.13	0.19	93.98	0.03	0.09	2.14
1,1-Dichloroethylene	18-Oct-04	0.2	0.21	0.20	0.18	0.16	0.19	0.18	0.12	0.18	88.41	0.03	0.09	2.16
1,2-Dibromoethane	18-Oct-04	0.2	0.18	0.16	0.15	0.14	0.16	0.14	0.10	0.15	73.10	0.03	0.08	2.47
1,2-Dichloroethane	18-Oct-04	0.2	0.19	0.19	0.20	0.16	0.19	0.18	0.11	0.17	87.10	0.03	0.10	2.01
1,2-Dichloropropane	18-Oct-04	0.2	0.18	0.16	0.18	0.13	0.16	0.15	0.09	0.15	74.69	0.03	0.10	2.05
1,4-Dioxane	18-Oct-04	0.2	0.21	0.20	0.19	0.23	0.24	0.22	0.13	0.21	102.54	0.04	0.11	1.78
Dichlorodifluoromethane	18-Oct-04	0.2	0.22	0.23	0.22	0.18	0.23	0.21	0.14	0.21	103.32	0.03	0.10	1.94
Dibromochloromethane	18-Oct-04	0.2	0.16	0.16	0.14	0.11	0.14	0.11	0.07	0.13	63.35	0.03	0.09	2.11
trans-1,2-Dichloroethylene	18-Oct-04	0.2	0.20	0.20	0.19	0.16	0.18	0.18	0.11	0.18	87.50	0.03	0.10	2.05
cis-1,2-Dichloroethylene	18-Oct-04	0.2	0.19	0.19	0.18	0.17	0.19	0.17	0.12	0.17	87.13	0.03	0.08	2.39
cis-1,3-Dichloropropene	18-Oct-04	0.2	0.18	0.17	0.16	0.13	0.15	0.15	0.10	0.15	74.40	0.03	0.08	2.42
m-Dichlorobenzene	18-Oct-04	0.2	0.22	0.22	0.21	0.18	0.21	0.19	0.12	0.19	96.12	0.03	0.10	1.91
o-Dichlorobenzene	18-Oct-04	0.2	0.21	0.21	0.20	0.17	0.19	0.18	0.12	0.18	91.18	0.03	0.10	2.10
p-Dichlorobenzene	18-Oct-04	0.2	0.22	0.22	0.21	0.18	0.20	0.20	0.13	0.19	96.86	0.03	0.10	1.93
trans-1,3-Dichloropropene	18-Oct-04	0.2	0.17	0.18	0.17	0.14	0.16	0.15	0.09	0.15	75.35	0.03	0.09	2.22
Ethanol	11-Oct-04	0.2	0.24	0.26	0.24	0.27	0.34	0.30	0.32	0.28	139.96	0.04	0.13	1.57
Ethylbenzene	18-Oct-04	0.2	0.19	0.19	0.18	0.15	0.18	0.16	0.11	0.17	82.86	0.03	0.09	2.24
Ethyl Acetate	18-Oct-04	0.2	0.19	0.19	0.20	0.21	0.22	0.18	0.13	0.19	94.35	0.03	0.09	2.13
4-Ethyltoluene	18-Oct-04	0.2	0.20	0.19	0.19	0.16	0.18	0.17	0.11	0.17	85.24	0.03	0.10	2.05

Method: TO-15 (VTO14/15)
Instrument(s): GCMS2W, GCMSW
Analyst: Pooled

Matrix: AIR
Quant Factor: 1.00
Study Period: October,2004

			Replicate Spikes											
Cmpd./Element/Parm. Name	Analysis Date	Spike ppbv	R1 ppbv	R2 ppbv	R3 ppbv	R4 ppbv	R5 ppbv	R6 ppbv	R7 ppbv	X-Bar ppbv	X-Bar %Recov.	STD.Dev. ppbv	MDL [illegible]	Spike/MDL Ratio
Freon 113	18-Oct-04	0.2	0.19	0.20	0.18	0.15	0.18	0.17	0.12	0.17	85.71	0.03	0.09	2.18
Freon 114	18-Oct-04	0.2	0.22	0.24	0.23	0.19	0.23	0.22	0.14	0.21	105.18	0.03	0.11	1.88
Heptane	18-Oct-04	0.2	0.21	0.21	0.18	0.17	0.18	0.17	0.12	0.18	88.53	0.03	0.10	2.04
Hexachlorobutadiene	18-Oct-04	0.2	0.16	0.16	0.17	0.13	0.18	0.17	0.11	0.15	76.78	0.03	0.08	2.39
Hexane	18-Oct-04	0.2	0.20	0.21	0.21	0.16	0.20	0.19	0.13	0.19	92.60	0.03	0.09	2.12
2-Hexanone	18-Oct-04	0.2	0.18	0.19	0.16	0.15	0.16	0.17	0.11	0.16	79.89	0.03	0.08	2.46
Isopropylbenzene	18-Oct-04	0.2	0.20	0.20	0.19	0.16	0.18	0.17	0.12	0.17	86.74	0.03	0.09	2.19
Isopropyl Alcohol	18-Oct-04	0.2	0.23	0.24	0.22	0.19	0.21	0.21	0.14	0.21	102.76	0.03	0.11	1.89
Methylene chloride	18-Oct-04	0.2	0.24	0.24	0.23	0.20	0.23	0.21	0.15	0.21	107.45	0.03	0.10	2.07
Methyl ethyl ketone	18-Oct-04	0.2	0.18	0.16	0.15	0.13	0.15	0.14	0.09	0.15	72.99	0.03	0.09	2.17
Methyl Isobutyl Ketone	18-Oct-04	0.2	0.19	0.19	0.18	0.15	0.16	0.17	0.11	0.16	82.08	0.03	0.09	2.35
Methyl Tert Butyl Ether	18-Oct-04	0.2	0.19	0.17	0.17	0.14	0.17	0.16	0.12	0.16	79.47	0.02	0.07	2.74
Nonane	18-Oct-04	0.2	0.22	0.22	0.21	0.18	0.20	0.19	0.13	0.19	95.12	0.03	0.10	1.97
Pentane	18-Oct-04	0.2	0.23	0.23	0.22	0.19	0.22	0.23	0.14	0.21	103.61	0.03	0.10	1.91
Propylene	11-Oct-04	0.2	0.32	0.39	0.37	0.43	0.46	0.45	0.40	0.40	200.30	0.05	0.15	1.34
Styrene	18-Oct-04	0.2	0.16	0.16	0.15	0.12	0.14	0.14	0.09	0.14	68.78	0.03	0.08	2.52
1,1,1-Trichloroethane	18-Oct-04	0.2	0.18	0.18	0.17	0.15	0.16	0.15	0.10	0.16	78.51	0.03	0.08	2.42
1,1,2,2-Tetrachloroethane	18-Oct-04	0.2	0.21	0.21	0.20	0.17	0.19	0.18	0.12	0.18	92.29	0.03	0.09	2.14
1,1,2-Trichloroethane	18-Oct-04	0.2	0.16	0.18	0.17	0.13	0.15	0.17	0.09	0.15	75.68	0.03	0.09	2.16
1,2,4-Trichlorobenzene	18-Oct-04	0.2	0.13	0.12	0.11	0.09	0.13	0.12	0.08	0.11	55.39	0.02	0.06	3.15
1,2,4-Trimethylbenzene	18-Oct-04	0.2	0.19	0.19	0.18	0.15	0.18	0.16	0.11	0.17	83.38	0.03	0.09	2.11
1,3,5-Trimethylbenzene	18-Oct-04	0.2	0.20	0.20	0.19	0.16	0.19	0.17	0.12	0.18	87.93	0.03	0.10	2.06
2,2,4-Trimethylpentane	18-Oct-04	0.2	0.21	0.21	0.20	0.17	0.20	0.19	0.12	0.19	92.85	0.03	0.10	1.99
Tertiary Butyl Alcohol	18-Oct-04	0.2	0.21	0.22	0.20	0.17	0.20	0.18	0.12	0.19	92.57	0.03	0.10	1.97
Tetrachloroethylene	18-Oct-04	0.2	0.19	0.17	0.17	0.16	0.16	0.16	0.10	0.16	78.97	0.03	0.08	2.41
Tetrahydrofuran	18-Oct-04	0.2	0.13	0.23	0.22	0.17	0.19	0.19	0.15	0.18	90.85	0.04	0.12	1.67
Toluene	18-Oct-04	0.2	0.16	0.19	0.16	0.14	0.17	0.14	0.11	0.15	76.37	0.03	0.08	2.41
Trichloroethylene	18-Oct-04	0.2	0.19	0.19	0.17	0.15	0.19	0.19	0.11	0.17	84.39	0.03	0.10	2.10
Trichlorofluoromethane	18-Oct-04	0.2	0.19	0.21	0.19	0.16	0.19	0.18	0.12	0.18	88.72	0.03	0.09	2.20
Vinyl chloride	18-Oct-04	0.2	0.23	0.25	0.24	0.20	0.24	0.23	0.15	0.22	108.99	0.03	0.11	1.88
Vinyl Acetate	18-Oct-04	0.2	0.17	0.19	0.17	0.13	0.17	0.15	0.09	0.15	75.91	0.03	0.10	1.93
m,p-Xylene	18-Oct-04	0.4	0.38	0.37	0.35	0.31	0.35	0.33	0.21	0.33	82.49	0.06	0.18	2.21
o-Xylene	18-Oct-04	0.2	0.19	0.19	0.18	0.16	0.18	0.17	0.11	0.17	82.76	0.03	0.09	2.33

Method Blank Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW212-MB	W04883.D	1	02/28/05	WG	n/a	n/a	VW212

The QC reported here applies to the following samples: **Method:** TO-15

N91584-1, N91584-2, N91584-3, N91584-4, N91584-5, N91584-6, N91584-7, N91584-8, N91584-9, N91584-10, N91584-11

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	110%	78-124%

Method Blank Summary

Page 1 of 1

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W70-MB	2W1617.D	1	02/11/05	MC	n/a	n/a	V2W70

The QC reported here applies to the following samples: **Method:** TO-15

V2W70-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	78-124%

Method Blank Summary

Page 1 of 1

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W72-MB	2W1658.D	1	02/15/05	MC	n/a	n/a	V2W72

The QC reported here applies to the following samples: **Method:** TO-15

V2W72-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	78-124%

Method Blank Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW207-MB	W04773.D	1	02/16/05	WG	n/a	n/a	VW207

The QC reported here applies to the following samples: **Method:** TO-15

VW207-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	105%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW212-BS	W04881.D	1	02/28/05	WG	n/a	n/a	VW212
VW212-BSD	W04882.D	1	02/28/05	WG	n/a	n/a	VW212

The QC reported here applies to the following samples: **Method:** TO-15

N91584-1, N91584-2, N91584-3, N91584-4, N91584-5, N91584-6, N91584-7, N91584-8, N91584-9, N91584-10, N91584-11

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	10.8	108	10.2	102	6	70-130/30
67-66-3	Chloroform	10	11.1	111	10.6	106	5	70-130/30
74-87-3	Chloromethane	10	10.3	103	10.0	100	3	70-130/30
56-23-5	Carbon tetrachloride	10	11.3	113	11.5	115	2	70-130/30
75-34-3	1,1-Dichloroethane	10	11.3	113	11.0	110	3	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.0	110	11.0	110	0	70-130/30
107-06-2	1,2-Dichloroethane	10	11.0	110	11.2	112	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	11.2	112	10.9	109	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	11.0	110	11.0	110	0	70-130/30
75-09-2	Methylene chloride	10	10.2	102	10.0	100	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.9	109	12.0	120	10	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.3	103	10.3	103	0	70-130/30
79-00-5	1,1,2-Trichloroethane	10	11.3	113	11.2	112	1	70-130/30
127-18-4	Tetrachloroethylene	10	10.7	107	10.9	109	2	70-130/30
79-01-6	Trichloroethylene	10	10	100	10.2	102	2	70-130/30
75-01-4	Vinyl chloride	10	10.4	104	10	100	4	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	101%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W70-BS	2W1615.D	1	02/11/05	MC	n/a	n/a	V2W70
V2W70-BSD	2W1616.D	1	02/11/05	MC	n/a	n/a	V2W70

The QC reported here applies to the following samples: **Method:** TO-15

V2W70-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	11.0	110	10.3	103	7	70-130/30
67-66-3	Chloroform	10	9.9	99	10.4	104	5	70-130/30
74-87-3	Chloromethane	10	10.6	106	9.3	93	13	70-130/30
56-23-5	Carbon tetrachloride	10	10.1	101	9.9	99	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10.0	100	9.6	96	4	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.5	105	9.9	99	6	70-130/30
107-06-2	1,2-Dichloroethane	10	9.9	99	9.1	91	8	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.3	103	9.8	98	5	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.9	99	9.8	98	1	70-130/30
75-09-2	Methylene chloride	10	10.1	101	9.6	96	5	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.8	98	9.8	98	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.5	105	9.0	90	15	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.1	101	8.8	88	14	70-130/30
127-18-4	Tetrachloroethylene	10	9.9	99	10.4	104	5	70-130/30
79-01-6	Trichloroethylene	10	10.1	101	10.5	105	4	70-130/30
75-01-4	Vinyl chloride	10	10.8	108	9.6	96	12	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	99%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number:	N91584
Account:	GTIMAAN Shaw E & I, Inc.
Project:	MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W72-BS	2W1656.D	1	02/15/05	MC	n/a	n/a	V2W72
V2W72-BSD	2W1657.D	1	02/15/05	MC	n/a	n/a	V2W72

The QC reported here applies to the following samples: **Method:** TO-15

V2W72-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	10.5	105	10.3	103	2	70-130/30
67-66-3	Chloroform	10	10.0	100	10.5	105	5	70-130/30
74-87-3	Chloromethane	10	9.8	98	9.5	95	3	70-130/30
56-23-5	Carbon tetrachloride	10	10.9	109	10.6	106	3	70-130/30
75-34-3	1,1-Dichloroethane	10	10.2	102	9.0	90	13	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.1	101	9.8	98	3	70-130/30
107-06-2	1,2-Dichloroethane	10	11.0	110	9.3	93	17	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.0	100	9.8	98	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.7	97	9.4	94	3	70-130/30
75-09-2	Methylene chloride	10	9.5	95	9.3	93	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.5	105	9.8	98	7	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.3	103	9.2	92	11	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.7	97	8.5	85	13	70-130/30
127-18-4	Tetrachloroethylene	10	10.5	105	11.0	110	5	70-130/30
79-01-6	Trichloroethylene	10	9.8	98	10.8	108	10	70-130/30
75-01-4	Vinyl chloride	10	10.0	100	9.8	98	2	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	97%	97%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW207-BS	W04771.D	1	02/16/05	WG	n/a	n/a	VW207
VW207-BSD	W04772.D	1	02/16/05	WG	n/a	n/a	VW207

The QC reported here applies to the following samples: **Method:** TO-15

VW207-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	10.7	107	9.3	93	14	70-130/30
67-66-3	Chloroform	10	10.5	105	9.2	92	13	70-130/30
74-87-3	Chloromethane	10	11.0	110	9.6	96	14	70-130/30
56-23-5	Carbon tetrachloride	10	10.5	105	9.3	93	12	70-130/30
75-34-3	1,1-Dichloroethane	10	10.6	106	9.2	92	14	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.6	106	9.3	93	13	70-130/30
107-06-2	1,2-Dichloroethane	10	10.5	105	9.2	92	13	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.4	104	9.1	91	13	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.1	101	9.1	91	10	70-130/30
75-09-2	Methylene chloride	10	9.8	98	8.6	86	13	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.5	105	9.3	93	12	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.4	104	8.8	88	17	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.7	107	9.3	93	14	70-130/30
127-18-4	Tetrachloroethylene	10	10.1	101	8.6	86	16	70-130/30
79-01-6	Trichloroethylene	10	10.2	102	8.8	88	15	70-130/30
75-01-4	Vinyl chloride	10	10.9	109	9.4	94	15	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	97%	97%	78-124%

Duplicate Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N91584-1DUP	W04885.D	1	02/28/05	WG	n/a	n/a	VW212
N91584-1	W04884.D	1	02/28/05	WG	n/a	n/a	VW212

The QC reported here applies to the following samples: **Method:** TO-15

N91584-1, N91584-2, N91584-3, N91584-4, N91584-5, N91584-6, N91584-7, N91584-8, N91584-9, N91584-10, N91584-11

CAS No.	Compound	N91584-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	0.57		0.58		2	12
74-87-3	Chloromethane	0.48		0.51		6	20
56-23-5	Carbon tetrachloride	ND		ND		nc	10
75-34-3	1,1-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethylene	ND		ND		nc	10
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	10
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	10
75-09-2	Methylene chloride	0.23		0.23		0	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	10
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethylene	0.15	J	0.17	J	13* [a]	12
79-01-6	Trichloroethylene	ND		ND		nc	10
75-01-4	Vinyl chloride	ND		ND		nc	10

CAS No.	Surrogate Recoveries	DUP	N91584-1	Limits
460-00-4	4-Bromofluorobenzene	108%	107%	78-124%

(a) Outside control limits.

Summa Cleaning Certification

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W70-SCC	2W1619.D	1	02/11/05	MC	n/a	n/a	V2W70

The QC reported here (Summa A211) applies to the following samples: **Method:** TO-15

Batch CP1387 cleaned 02/07/05: N91584-1(A245), N91584-2(A197), N91584-5(A108), N91584-8(A251), N91584-9(A340), N91584-10(A223)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	78-124%

Summa Cleaning Certification

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Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W72-SCC	2W1661.D	1	02/15/05	MC	n/a	n/a	V2W72

The QC reported here (Summa A328) applies to the following samples: **Method:** TO-15

Batch CP1391 cleaned 02/11/05: N91584-3(A312), N91584-4(A248)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	78-124%

Summa Cleaning Certification

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW207-SCC	W04774.D	1	02/16/05	WG	n/a	n/a	VW207

The QC reported here (Summa A196) applies to the following samples: **Method:** TO-15

Batch CP1392 cleaned 02/14/05: N91584-6(A468), N91584-7(A196), N91584-11(A469)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	105%	78-124%

Instrument Performance Check (BFB)

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample:	V2W68-BFB	**Injection Date:**	02/09/05
Lab File ID:	2W1579.D	**Injection Time:**	08:32
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	23272	15.8		Pass
75	30.0 - 66.0% of mass 95	64101	43.6		Pass
95	Base peak, 100% relative abundance	147170	100.0		Pass
96	5.0 - 9.0% of mass 95	9702	6.6		Pass
173	Less than 2.0% of mass 174	617	0.42	(0.49) [a]	Pass
174	50.0 - 120.0% of mass 95	125813	85.5		Pass
175	4.0 - 9.01% of mass 174	9045	6.1	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	119925	81.5	(95.3) [a]	Pass
177	5.0 - 9.0% of mass 176	8157	5.5	(6.8) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W68-IC68	2W1580.D	02/09/05	09:18	00:46	Initial cal 0.2
V2W68-IC68	2W1581.D	02/09/05	10:05	01:33	Initial cal 0.5
V2W68-IC68	2W1582.D	02/09/05	10:51	02:19	Initial cal 2
V2W68-IC68	2W1583.D	02/09/05	12:50	04:18	Initial cal 5
V2W68-ICC68	2W1584.D	02/09/05	13:37	05:05	Initial cal 10
V2W68-IC68	2W1585.D	02/09/05	14:23	05:51	Initial cal 20
V2W68-IC68	2W1587.D	02/09/05	15:57	07:25	Initial cal 40

Instruction Performance Check (BFB)

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample:	V2W70-BFB	**Injection Date:**	02/11/05
Lab File ID:	2W1613.D	**Injection Time:**	08:30
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	18089	16.4		Pass
75	30.0 - 66.0% of mass 95	48562	44.1		Pass
95	Base peak, 100% relative abundance	109994	100.0		Pass
96	5.0 - 9.0% of mass 95	7584	6.9		Pass
173	Less than 2.0% of mass 174	489	0.44	(0.48) [a]	Pass
174	50.0 - 120.0% of mass 95	102778	93.4		Pass
175	4.0 - 9.01% of mass 174	7547	6.9	(7.3) [a]	Pass
176	93.0 - 101.0% of mass 174	100154	91.1	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	6561	6.0	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W70-CC68	2W1614.D	02/11/05	09:16	00:46	Continuing cal 10
V2W70-BS	2W1615.D	02/11/05	10:03	01:33	Blank Spike
V2W70-BSD	2W1616.D	02/11/05	10:50	02:20	Blank Spike Duplicate
V2W70-MB	2W1617.D	02/11/05	12:25	03:55	Method Blank
V2W70-SCC	2W1618.D	02/11/05	13:11	04:41	Summa Cleaning Certification
V2W70-SCC	2W1619.D	02/11/05	13:57	05:27	Summa Cleaning Certification
N90453-5	2W1620.D	02/11/05	14:44	06:14	(used for QC only; not part of job N91584)
N90453-5DUP	2W1621.D	02/11/05	15:40	07:10	Duplicate
ZZZZZZ	2W1624.D	02/11/05	18:00	09:30	(unrelated sample)
ZZZZZZ	2W1625.D	02/11/05	18:46	10:16	(unrelated sample)
ZZZZZZ	2W1626.D	02/11/05	19:32	11:02	(unrelated sample)
ZZZZZZ	2W1627.D	02/11/05	20:18	11:48	(unrelated sample)
ZZZZZZ	2W1628.D	02/11/05	21:03	12:33	(unrelated sample)
ZZZZZZ	2W1629.D	02/11/05	21:49	13:19	(unrelated sample)
ZZZZZZ	2W1630.D	02/11/05	22:35	14:05	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W72-BFB
Lab File ID: 2W1654.D
Instrument ID: GCMS2W
Injection Date: 02/15/05
Injection Time: 12:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	24989	18.1		Pass
75	30.0 - 66.0% of mass 95	66576	48.2		Pass
95	Base peak, 100% relative abundance	138141	100.0		Pass
96	5.0 - 9.0% of mass 95	9616	7.0		Pass
173	Less than 2.0% of mass 174	619	0.45	(0.51)[a]	Pass
174	50.0 - 120.0% of mass 95	122392	88.6		Pass
175	4.0 - 9.01% of mass 174	8608	6.2	(7.0)[a]	Pass
176	93.0 - 101.0% of mass 174	118778	86.0	(97.0)[a]	Pass
177	5.0 - 9.0% of mass 176	7599	5.5	(6.4)[b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W72-CC68	2W1655.D	02/15/05	13:22	00:46	Continuing cal 10
V2W72-BS	2W1656.D	02/15/05	14:08	01:32	Blank Spike
V2W72-BSD	2W1657.D	02/15/05	14:55	02:19	Blank Spike Duplicate
V2W72-MB	2W1658.D	02/15/05	15:41	03:05	Method Blank
N90638-5	2W1659.D	02/15/05	16:46	04:10	(used for QC only; not part of job N91584)
N90638-5DUP	2W1660.D	02/15/05	17:32	04:56	Duplicate
V2W72-SCC	2W1661.D	02/15/05	18:18	05:42	Summa Cleaning Certification
ZZZZZZ	2W1666.D	02/15/05	22:16	09:40	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: VW206-BFB
Lab File ID: W04752.D
Instrument ID: GCMSW
Injection Date: 02/14/05
Injection Time: 09:19

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	57522	16.0		Pass
75	30.0 - 66.0% of mass 95	161813	44.9		Pass
95	Base peak, 100% relative abundance	360234	100.0		Pass
96	5.0 - 9.0% of mass 95	24509	6.8		Pass
173	Less than 2.0% of mass 174	1580	0.44	(0.5) [a]	Pass
174	50.0 - 120.0% of mass 95	316992	88.0		Pass
175	4.0 - 9.01% of mass 174	22674	6.3	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	309354	85.9	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	20232	5.6	(6.5) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW206-IC206	W04753.D	02/14/05	10:10	00:51	Initial cal 0.2
VW206-IC206	W04754.D	02/14/05	11:04	01:45	Initial cal 0.5
VW206-IC206	W04756.D	02/14/05	12:47	03:28	Initial cal 5
VW206-IC206	W04757.D	02/14/05	13:38	04:19	Initial cal 2
VW206-ICC206	W04758.D	02/14/05	14:30	05:11	Initial cal 10
VW206-IC206	W04759.D	02/14/05	15:21	06:02	Initial cal 20
VW206-IC206	W04762.D	02/14/05	17:04	07:45	Initial cal 40

Instrument Performance Check (BFB)

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: VW207-BFB
Lab File ID: W04769.D
Instrument ID: GCMSW
Injection Date: 02/16/05
Injection Time: 08:51

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	52562	19.4		Pass
75	30.0 - 66.0% of mass 95	131752	48.7		Pass
95	Base peak, 100% relative abundance	270293	100.0		Pass
96	5.0 - 9.0% of mass 95	19144	7.1		Pass
173	Less than 2.0% of mass 174	1169	0.43	(0.53) [a]	Pass
174	50.0 - 120.0% of mass 95	222037	82.1		Pass
175	4.0 - 9.01% of mass 174	15632	5.8	(7.0) [a]	Pass
176	93.0 - 101.0% of mass 174	214613	79.4	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	14270	5.3	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW207-CC206	W04770.D	02/16/05	09:44	00:53	Continuing cal 10
VW207-BS	W04771.D	02/16/05	10:35	01:44	Blank Spike
VW207-BSD	W04772.D	02/16/05	11:27	02:36	Blank Spike Duplicate
VW207-MB	W04773.D	02/16/05	12:19	03:28	Method Blank
VW207-SCC	W04774.D	02/16/05	13:11	04:20	Summa Cleaning Certification
N90640-8	W04775.D	02/16/05	14:01	05:10	(used for QC only; not part of job N91584)
N90640-8DUP	W04776.D	02/16/05	14:52	06:01	Duplicate
ZZZZZZ	W04777.D	02/16/05	16:00	07:09	(unrelated sample)
ZZZZZZ	W04778.D	02/16/05	16:52	08:01	(unrelated sample)
ZZZZZZ	W04781.D	02/16/05	19:28	10:37	(unrelated sample)
ZZZZZZ	W04782.D	02/16/05	20:19	11:28	(unrelated sample)
ZZZZZZ	W04783.D	02/16/05	21:11	12:20	(unrelated sample)
ZZZZZZ	W04784.D	02/16/05	22:02	13:11	(unrelated sample)
ZZZZZZ	W04785.D	02/16/05	22:54	14:03	(unrelated sample)
ZZZZZZ	W04786.D	02/16/05	23:46	14:55	(unrelated sample)
ZZZZZZ	W04787.D	02/17/05	00:38	15:47	(unrelated sample)
ZZZZZZ	W04789.D	02/17/05	02:21	17:30	(unrelated sample)
ZZZZZZ	W04790.D	02/17/05	03:13	18:22	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: VW211-BFB
Lab File ID: W04857.D
Instrument ID: GCMSW
Injection Date: 02/24/05
Injection Time: 09:07

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	42058	21.2		Pass
75	30.0 - 66.0% of mass 95	102458	51.7		Pass
95	Base peak, 100% relative abundance	198165	100.0		Pass
96	5.0 - 9.0% of mass 95	14432	7.3		Pass
173	Less than 2.0% of mass 174	878	0.44	(0.5) [a]	Pass
174	50.0 - 120.0% of mass 95	176000	88.8		Pass
175	4.0 - 9.01% of mass 174	12545	6.3	(7.1) [a]	Pass
176	93.0 - 101.0% of mass 174	172010	86.8	(97.7) [a]	Pass
177	5.0 - 9.0% of mass 176	11233	5.7	(6.5) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW211-IC211	W04859.D	02/24/05	10:50	01:43	Initial cal 0.5
VW211-IC211	W04860.D	02/24/05	11:42	02:35	Initial cal 0.2
VW211-IC211	W04861.D	02/24/05	12:34	03:27	Initial cal 2.0
VW211-IC211	W04862.D	02/24/05	13:25	04:18	Initial cal 5
VW211-ICC211	W04863.D	02/24/05	14:17	05:10	Initial cal 10
VW211-IC211	W04864.D	02/24/05	15:08	06:01	Initial cal 20
VW211-IC211	W04866.D	02/24/05	16:51	07:44	Initial cal 40

Instrument Performance Check (BFB)

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample:	VW212-BFB	**Injection Date:**	02/28/05
Lab File ID:	W04879.D	**Injection Time:**	08:52
Instrument ID:	GCMSW		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	50122	21.7		Pass
75	30.0 - 66.0% of mass 95	119346	51.7		Pass
95	Base peak, 100% relative abundance	230656	100.0		Pass
96	5.0 - 9.0% of mass 95	17219	7.5		Pass
173	Less than 2.0% of mass 174	1076	0.47	(0.53) [a]	Pass
174	50.0 - 120.0% of mass 95	204458	88.6		Pass
175	4.0 - 9.01% of mass 174	14524	6.3	(7.1) [a]	Pass
176	93.0 - 101.0% of mass 174	199616	86.5	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	13075	5.7	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW212-CC211	W04880.D	02/28/05	09:50	00:58	Continuing cal 10
VW212-BS	W04881.D	02/28/05	10:42	01:50	Blank Spike
VW212-BSD	W04882.D	02/28/05	11:33	02:41	Blank Spike Duplicate
VW212-MB	W04883.D	02/28/05	12:25	03:33	Method Blank
N91584-1	W04884.D	02/28/05	13:56	05:04	IA-1
N91584-1DUP	W04885.D	02/28/05	14:47	05:55	Duplicate
N91584-5	W04886.D	02/28/05	15:46	06:54	IA-4
N91584-3	W04887.D	02/28/05	16:43	07:51	IA-2D
N91584-4	W04888.D	02/28/05	17:35	08:43	IA-3
N91584-2	W04889.D	02/28/05	18:26	09:34	IA-2
N91584-6	W04890.D	02/28/05	19:18	10:26	IA-5
N91584-7	W04891.D	02/28/05	20:10	11:18	IA-6
N91584-8	W04892.D	02/28/05	21:01	12:09	IA-7
N91584-9	W04893.D	02/28/05	21:53	13:01	IA-8
N91584-10	W04894.D	02/28/05	22:44	13:52	IA-9
N91584-11	W04895.D	02/28/05	23:36	14:44	IA-10
ZZZZZZ	W04898.D	03/01/05	02:11	17:19	(unrelated sample)
ZZZZZZ	W04899.D	03/01/05	03:03	18:11	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std: V2W70-CC68
Lab File ID: 2W1614.D
Instrument ID: GCMS2W
Injection Date: 02/11/05
Injection Time: 09:16
Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	189685	10.22	922319	11.95	809069	16.16
Upper Limit [a]	265559	10.55	1291247	12.28	1132697	16.49
Lower Limit [b]	113811	9.89	553391	11.62	485441	15.83

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V2W70-BS	226393	10.21	1111191	11.95	958567	16.16
V2W70-BSD	244873	10.21	1185928	11.95	1011688	16.16
V2W70-MB	209601	10.22	1004933	11.95	806554	16.16
V2W70-SCC	194002	10.21	957249	11.95	789462	16.16
V2W70-SCC	186975	10.22	898751	11.95	749099	16.16
N90453-5	184359	10.22	919063	11.95	769144	16.16
N90453-5DUP	207657	10.22	1010838	11.95	833697	16.16
ZZZZZZ	196228	10.21	960251	11.95	799647	16.16
ZZZZZZ	224375	10.21	1113620	11.95	843275	16.16
ZZZZZZ	191381	10.21	871041	11.95	719364	16.16
ZZZZZZ	186704	10.22	802195	11.95	657160	16.16
ZZZZZZ	182938	10.23	858149	11.95	661061	16.16
ZZZZZZ	223642	10.24	1121325	11.96	877535	16.16
ZZZZZZ	211377	10.22	1048615	11.95	812976	16.16

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std:	V2W72-CC68	**Injection Date:**	02/15/05
Lab File ID:	2W1655.D	**Injection Time:**	13:22
Instrument ID:	GCMS2W	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	224319	10.21	1123449	11.94	984415	16.15
Upper Limit [a]	314047	10.54	1572829	12.27	1378181	16.48
Lower Limit [b]	134591	9.88	674069	11.61	590649	15.82

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V2W72-BS	239243	10.21	1212524	11.94	1029935	16.15
V2W72-BSD	250493	10.21	1218611	11.94	1021764	16.15
V2W72-MB	242882	10.21	1189413	11.94	967704	16.15
N90638-5	207424	10.21	1007137	11.94	841892	16.15
N90638-5DUP	203342	10.21	977319	11.94	820291	16.15
V2W72-SCC	199362	10.21	953960	11.94	766750	16.15
ZZZZZZ	156915	10.21	732317	11.94	618393	16.15

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std: VW207-CC206
Lab File ID: W04770.D
Instrument ID: GCMSW
Injection Date: 02/16/05
Injection Time: 09:44
Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	414672	10.58	2062965	12.34	1738344	16.52
Upper Limit [a]	580541	10.91	2888151	12.67	2433682	16.85
Lower Limit [b]	248803	10.25	1237779	12.01	1043006	16.19

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
VW207-BS	438856	10.58	2139668	12.34	1769140	16.52
VW207-BSD	487541	10.58	2429517	12.34	2028117	16.52
VW207-MB	509571	10.57	2358784	12.33	1934551	16.52
VW207-SCC	363108	10.58	1762809	12.33	1424830	16.52
N90640-8	332644	10.59	1570084	12.34	1255342	16.52
N90640-8DUP	320198	10.59	1505067	12.34	1203070	16.52
ZZZZZZ	376924	10.59	1782729	12.34	1440198	16.52
ZZZZZZ	341279	10.59	1646408	12.34	1315921	16.52
ZZZZZZ	334796	10.58	1622281	12.33	1336585	16.52
ZZZZZZ	338498	10.57	1607031	12.33	1322938	16.52
ZZZZZZ	320493	10.57	1555748	12.33	1256100	16.52
ZZZZZZ	327077	10.57	1581901	12.33	1309366	16.52
ZZZZZZ	318682	10.57	1532104	12.33	1231455	16.52
ZZZZZZ	318370	10.58	1523765	12.33	1222009	16.52
ZZZZZZ	310037	10.59	1510651	12.34	1232356	16.52
ZZZZZZ	487082	10.58	2271489	12.34	1763226	16.52
ZZZZZZ	430587	10.59	2047661	12.34	1571374	16.52

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: N91584
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std: VW212-CC211
Lab File ID: W04880.D
Instrument ID: GCMSW
Injection Date: 02/28/05
Injection Time: 09:50
Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	276524	10.57	1322648	12.32	1082189	16.51
Upper Limit [a]	387134	10.90	1851707	12.65	1515065	16.84
Lower Limit [b]	165914	10.24	793589	11.99	649313	16.18

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
VW212-BS	262935	10.56	1329130	12.32	1072970	16.51
VW212-BSD	288966	10.57	1451045	12.32	1146529	16.51
VW212-MB	312477	10.57	1476955	12.32	1186514	16.51
N91584-1	287570	10.57	1354230	12.33	1074548	16.51
N91584-1DUP	243429	10.57	1151740	12.33	942737	16.51
N91584-5	277793	10.57	1311047	12.33	1053804	16.51
N91584-3	292041	10.57	1364712	12.33	1107135	16.51
N91584-4	325638	10.57	1538237	12.33	1226291	16.51
N91584-2	278014	10.57	1333679	12.33	1086117	16.51
N91584-6	271737	10.57	1295183	12.33	1035770	16.51
N91584-7	271626	10.57	1324522	12.33	1061878	16.51
N91584-8	319705	10.57	1491228	12.33	1223798	16.51
N91584-9	298146	10.58	1395961	12.33	1106896	16.51
N91584-10	288468	10.58	1381927	12.33	1105457	16.51
N91584-11	283592	10.57	1399525	12.33	1131151	16.51
ZZZZZZ	362222	10.57	1714252	12.32	1356885	16.51
ZZZZZZ	314481	10.57	1499922	12.32	1159730	16.51

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

New Jersey
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Laboratories

04/07/05

Technical Report for

Shaw E & I, Inc.

MADEP, Tufts Road, Somerville, MA

86733 OP

Accutest Job Number: N94245

Sampling Date: 03/24/05

Report to:

Shaw E & I, Inc.
3 Riverside Drive
Andover, MA 01810

ATTN: Jim Collins

Total number of pages in report: 166

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

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Sample Summary

Shaw E & I, Inc.

Job No: N94245

MADEP, Tufts Road, Somerville, MA
Project No: Proj# 114744.01

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
N94245-1	03/24/05	08:15 JS	03/25/05	AIR	Air	IA-11
N94245-2	03/24/05	08:19 JS	03/25/05	AIR	Air	IA-12
N94245-3	03/24/05	08:37 JS	03/25/05	AIR	Air	IA-13
N94245-4	03/24/05	08:41 JS	03/25/05	AIR	Air	IA-14

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C. Sample Tracking Chronicle/Method References

Section 2 GC/MS Support Data (grouped by fraction)

A. Conformance/Non-conformance Summary
B. Method Blank Summary
C. Blank Spike Summary
D. Matrix Spike/Matrix Spike Duplicate Summary
E. Tune Results Summary
F. Internal Standard Summary
G. Surrogate Recovery Results Summary
H. Calibration Summary (sorted by Instrument)
I. Initial Calibration Check Summary
    Continuing Calibration Check Summary
J. Sample and Blank Chromatograms, Quant Reports, Mass Spectra, and Library Search Data

Section 3 GC Support Data

A. Conformance/Non-conformance Summary
B. Method Blank Summary
C. Blank Spike Summary
D. Matrix Spike/Matrix Spike Duplicate Summary
E. Surrogate Recovery Results Summary
F. Calibration Summary (sorted by Instrument)
    Initial Calibration Check Summary
    Continuing Calibration Check Summary
G. Retention Time Shift Summary
H. Sample, Blank and Multi-peak Standard Chromatograms and Quant Reports

Section 4 Metals Support Data (sorted by Instrument Type-ICP, Furnace, Flame, and Mercury)

A. Conformance/Non-conformance Summary
B. Initial and Continuing Calibration Blank
C. Initial and Continuing Calibration Checks
D. High and Low Check Standards
E. Interfering Element Check Standards
F. Method Blank Summary
G. Matrix Spike and Duplicates Summary
H. Blank Spike and Lab Control Sample Summary
I. Serial Dilution Summary

Section 5 General Chemistry/Petroleum Hydrocarbon Support Data

A. Conformance/Non-Conformance Summary
B. Batch Quality Control Summary
    Method Blank and Spike Blank Results Summary
    Duplicate Results Summary
    Matrix Spike Results Summary
C. Raw Data and IR Spectra (Petroleum Hydrocarbons)
D. Raw Data and Run Record (Hexavalent Chromium)

RedTir2 12/29/2004

RESULTS

Report of Analysis

Client Sample ID:	IA-11 17 Tufts St, Basement		
Lab Sample ID:	N94245-1	**Date Sampled:**	03/24/05
Matrix:	AIR - Air Summa ID: A350	**Date Received:**	03/25/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W2143.D	1	03/31/05	YMH	n/a	n/a	V2W96
Run #2 [a]	2W2093.D	2.7	03/28/05	YMH	n/a	n/a	V2W94

	Initial Volume
Run #1	400 ml
Run #2	400 ml

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.23	0.20	ppbv		1.1	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.47	0.20	ppbv		0.97	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.43	0.20	ppbv		1.5	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	1.3	0.20	ppbv		8.8	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	0.17	0.20	ppbv	J	0.91	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%	99%	78-124%

(a) Summa returned with high vacuum(18"Hg) In-house limit is 15"Hg. Flow controller found outside correct range for proper sampling on return. Sample pressurized and data reported with raised RL's>

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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Client Sample ID:	IA-12 17 Tufts St, 1st/Floor		
Lab Sample ID:	N94245-2	**Date Sampled:**	03/24/05
Matrix:	AIR - Air Summa ID: A138	**Date Received:**	03/25/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W2094.D	1	03/28/05	YMH	n/a	n/a	V2W94
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.39	0.20	ppbv		1.9	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.52	0.20	ppbv		1.1	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.30	0.20	ppbv		1.0	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.69	0.20	ppbv		4.7	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	IA-13 19 Tufts St, basement		
Lab Sample ID:	N94245-3	**Date Sampled:**	03/24/05
Matrix:	AIR - Air Summa ID: A200	**Date Received:**	03/25/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W2095.D	1	03/28/05	YMH	n/a	n/a	V2W94
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.41	0.20	ppbv		0.85	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.10	0.20	ppbv	J	0.35	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.47	0.20	ppbv		3.2	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	IA-14 19 Tufts St, 1st/Fl		
Lab Sample ID:	N94245-4	**Date Sampled:**	03/24/05
Matrix:	AIR - Air Summa ID: A341	**Date Received:**	03/25/05
Method:	TO-15	**Percent Solids:**	n/a
Project:	MADEP, Tufts Road, Somerville, MA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2W2096.D	1	03/28/05	YMH	n/a	n/a	V2W94
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA Special List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	0.16	0.20	ppbv	J	0.78	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.52	0.20	ppbv		1.1	0.41	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	84.94	Methylene chloride	0.099	0.20	ppbv	J	0.34	0.69	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.14	0.20	ppbv	J	0.95	1.4	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		78-124%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

ACCUTEST. Laboratories

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE
MARLBOROUGH, MA 01752
TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: N54245
ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME Shaw Env
ADDRESS 3 Riverside Dr
CITY, Andover STATE MA ZIP 01810
SEND REPORT TO: James Collins
PHONE # 978 691 2108

FACILITY INFORMATION

PROJECT NAME MA DEP
LOCATION Tufts St Somerville
PROJECT NO. 114744.01
FAX # 978 691 2101

ANALYTICAL INFORMATION

TO-15
Chlorinated VOC To Be Reported Refer To Previous Job
Obtain 0.2 ppbV -RL-

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION		COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	HCl	NaOH	HNO3	H2SO4	NONE	TO-15		LAB USE ONLY
-1	IA-11	A350	3/24	0815 1215	BS	Air	1						X	W/FC	
-2	IA-12	A138	3/24	0819 1219	BS	Air	1						X		
-3	IA-13	A200	3/24	0837 1237	BS	Air	1						X		
-4	IA-14	A341	3/24	0841 1241	BS	Air	1						X		

DATA TURNAROUND INFORMATION

☐ 14 DAYS STANDARD
☐ 7 DAYS *RUSH*
☐ 48 HOUR EMERGENCY
☒ OTHER 3 DAY

APPROVED BY:

14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

☑ STANDARD
☑ COMMERCIAL "B"
☐ DISK DELIVERABLE
☐ STATE FORMS
☒ OTHER (SPECIFY) Redt2 per JC.
JS. 3/25/05

COMMENTS/REMARKS

4 Air Regulators on
RL

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1.	DATE TIME: 3/24 @ 1800	RECEIVED BY: 1. Via UPS	RELINQUISHED BY: UPS	DATE TIME: 3/25/05 @ 1200	RECEIVED BY: 2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE ____ C

Accutest Laboratories

Internal Sample Tracking Chronicle

Shaw E & I, Inc.

Job No: N94245

MADEP, Tufts Road, Somerville, MA
Project No: Proj# 114744.01

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
N94245-1 IA-11	Collected: 24-MAR-05 08:15 By: JS		Received: 25-MAR-05 By: MP			
N94245-1	TO-15	28-MAR-05 21:23	YMH			VTO15SL
N94245-1	TO-15	31-MAR-05 01:57	YMH			VTO15SL
N94245-2 IA-12	Collected: 24-MAR-05 08:19 By: JS		Received: 25-MAR-05 By: MP			
N94245-2	TO-15	28-MAR-05 22:09	YMH			VTO15SL
N94245-3 IA-13	Collected: 24-MAR-05 08:37 By: JS		Received: 25-MAR-05 By: MP			
N94245-3	TO-15	28-MAR-05 22:55	YMH			VTO15SL
N94245-4 IA-14	Collected: 24-MAR-05 08:41 By: JS		Received: 25-MAR-05 By: MP			
N94245-4	TO-15	28-MAR-05 23:42	YMH			VTO15SL

GC/MS
VOLATILE

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Shaw E & I, Inc.	**Job No**	N94245
Site:	MADEP, Tufts Road, Somerville, MA	**Report Date**	4/7/2005 8:31:18 AM

4 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 03/24/2005 and were received at Accutest on 03/25/2005 properly preserved and intact. These Samples received an Accutest job number of N94245. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method TO-15

Matrix: AIR **Batch ID:** V2W94

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) N94118-2DUP were used as the QC samples indicated.
- N94245-1: Summa returned with high vacuum(18"Hg) In-house limit is 15"Hg. Flow controller found outside correct range for proper sampling on return. Sample pressurized and data reported with raised RL's>

Matrix: AIR **Batch ID:** V2W96

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) N93822-1DUP were used as the QC samples indicated.

The Accutest Laboratories of New Jersey certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety.The Accutest Laboratories of NJ, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(N94245).

Method Blank Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W94-MB	2W2086.D	1	03/28/05	YMH	n/a	n/a	V2W94

The QC reported here applies to the following samples: **Method:** TO-15

N94245-1, N94245-2, N94245-3, N94245-4

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	99%	78-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W96-MB	2W2125.D	1	03/30/05	YMH	n/a	n/a	V2W96

The QC reported here applies to the following samples: **Method:** TO-15

N94245-1

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	98%	78-124%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ppbv	

Method Blank Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W70-MB	2W1617.D	1	02/11/05	MC	n/a	n/a	V2W70

The QC reported here applies to the following samples: **Method:** TO-15

V2W70-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	78-124%

Method Blank Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W72-MB	2W1658.D	1	02/15/05	MC	n/a	n/a	V2W72

The QC reported here applies to the following samples: **Method:** TO-15

V2W72-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	78-124%

Method Blank Summary

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Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW207-MB	W04773.D	1	02/16/05	WG	n/a	n/a	VW207

The QC reported here applies to the following samples: **Method:** TO-15

VW207-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	105%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W94-BS	2W2083.D	1	03/28/05	YMH	n/a	n/a	V2W94
V2W94-BSD	2W2085.D	1	03/28/05	YMH	n/a	n/a	V2W94

The QC reported here applies to the following samples: **Method:** TO-15

N94245-1, N94245-2, N94245-3, N94245-4

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	9.9	99	9.5	95	4	70-130/30
67-66-3	Chloroform	10	9.7	97	9.0	90	7	70-130/30
74-87-3	Chloromethane	10	9.5	95	8.8	88	8	70-130/30
56-23-5	Carbon tetrachloride	10	10.6	106	10.1	101	5	70-130/30
75-34-3	1,1-Dichloroethane	10	9.5	95	8.9	89	7	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.9	99	9.7	97	2	70-130/30
107-06-2	1,2-Dichloroethane	10	10.1	101	9.2	92	9	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.3	103	9.8	98	5	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.2	92	8.6	86	7	70-130/30
75-09-2	Methylene chloride	10	9.4	94	9.0	90	4	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.9	99	9.2	92	7	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.5	95	8.7	87	9	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.7	97	8.9	89	9	70-130/30
127-18-4	Tetrachloroethylene	10	9.7	97	9.1	91	6	70-130/30
79-01-6	Trichloroethylene	10	9.7	97	9.0	90	7	70-130/30
75-01-4	Vinyl chloride	10	9.9	99	9.3	93	6	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	98%	78-124%

Blank Spike/Blank Spike Duplicate Summary

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Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W96-BS	2W2123.D	1	03/30/05	YMH	n/a	n/a	V2W96
V2W96-BSD	2W2124.D	1	03/30/05	YMH	n/a	n/a	V2W96

The QC reported here applies to the following samples: **Method:** TO-15

N94245-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	9.8	98	9.5	95	3	70-130/30
67-66-3	Chloroform	10	10.6	106	10.8	108	2	70-130/30
74-87-3	Chloromethane	10	9.2	92	8.8	88	4	70-130/30
56-23-5	Carbon tetrachloride	10	11.3	113	10.9	109	4	70-130/30
75-34-3	1,1-Dichloroethane	10	9.7	97	8.9	89	9	70-130/30
75-35-4	1,1-Dichloroethylene	10	9.8	98	9.5	95	3	70-130/30
107-06-2	1,2-Dichloroethane	10	10.4	104	9.3	93	11	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.1	101	9.8	98	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.2	92	9.2	92	0	70-130/30
75-09-2	Methylene chloride	10	9.3	93	9.0	90	3	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.5	105	10.2	102	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.3	93	8.4	84	10	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.3	93	8.6	86	8	70-130/30
127-18-4	Tetrachloroethylene	10	10.7	107	10.7	107	0	70-130/30
79-01-6	Trichloroethylene	10	10.6	106	10.9	109	3	70-130/30
75-01-4	Vinyl chloride	10	9.5	95	9.1	91	4	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	100%	99%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W70-BS	2W1615.D	1	02/11/05	MC	n/a	n/a	V2W70
V2W70-BSD	2W1616.D	1	02/11/05	MC	n/a	n/a	V2W70

The QC reported here applies to the following samples: **Method:** TO-15

V2W70-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	11.0	110	10.3	103	7	70-130/30
67-66-3	Chloroform	10	9.9	99	10.4	104	5	70-130/30
74-87-3	Chloromethane	10	10.6	106	9.3	93	13	70-130/30
56-23-5	Carbon tetrachloride	10	10.1	101	9.9	99	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10.0	100	9.6	96	4	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.5	105	9.9	99	6	70-130/30
107-06-2	1,2-Dichloroethane	10	9.9	99	9.1	91	8	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.3	103	9.8	98	5	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.9	99	9.8	98	1	70-130/30
75-09-2	Methylene chloride	10	10.1	101	9.6	96	5	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.8	98	9.8	98	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.5	105	9.0	90	15	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.1	101	8.8	88	14	70-130/30
127-18-4	Tetrachloroethylene	10	9.9	99	10.4	104	5	70-130/30
79-01-6	Trichloroethylene	10	10.1	101	10.5	105	4	70-130/30
75-01-4	Vinyl chloride	10	10.8	108	9.6	96	12	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	101%	99%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W72-BS	2W1656.D	1	02/15/05	MC	n/a	n/a	V2W72
V2W72-BSD	2W1657.D	1	02/15/05	MC	n/a	n/a	V2W72

The QC reported here applies to the following samples: **Method:** TO-15

V2W72-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	10.5	105	10.3	103	2	70-130/30
67-66-3	Chloroform	10	10.0	100	10.5	105	5	70-130/30
74-87-3	Chloromethane	10	9.8	98	9.5	95	3	70-130/30
56-23-5	Carbon tetrachloride	10	10.9	109	10.6	106	3	70-130/30
75-34-3	1,1-Dichloroethane	10	10.2	102	9.0	90	13	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.1	101	9.8	98	3	70-130/30
107-06-2	1,2-Dichloroethane	10	11.0	110	9.3	93	17	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.0	100	9.8	98	2	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	9.7	97	9.4	94	3	70-130/30
75-09-2	Methylene chloride	10	9.5	95	9.3	93	2	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.5	105	9.8	98	7	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.3	103	9.2	92	11	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.7	97	8.5	85	13	70-130/30
127-18-4	Tetrachloroethylene	10	10.5	105	11.0	110	5	70-130/30
79-01-6	Trichloroethylene	10	9.8	98	10.8	108	10	70-130/30
75-01-4	Vinyl chloride	10	10.0	100	9.8	98	2	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	97%	97%	78-124%

Blank Spike/Blank Spike Duplicate Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW207-BS	W04771.D	1	02/16/05	WG	n/a	n/a	VW207
VW207-BSD	W04772.D	1	02/16/05	WG	n/a	n/a	VW207

The QC reported here applies to the following samples: **Method:** TO-15

VW207-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
75-00-3	Chloroethane	10	10.7	107	9.3	93	14	70-130/30
67-66-3	Chloroform	10	10.5	105	9.2	92	13	70-130/30
74-87-3	Chloromethane	10	11.0	110	9.6	96	14	70-130/30
56-23-5	Carbon tetrachloride	10	10.5	105	9.3	93	12	70-130/30
75-34-3	1,1-Dichloroethane	10	10.6	106	9.2	92	14	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.6	106	9.3	93	13	70-130/30
107-06-2	1,2-Dichloroethane	10	10.5	105	9.2	92	13	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.4	104	9.1	91	13	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.1	101	9.1	91	10	70-130/30
75-09-2	Methylene chloride	10	9.8	98	8.6	86	13	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.5	105	9.3	93	12	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.4	104	8.8	88	17	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.7	107	9.3	93	14	70-130/30
127-18-4	Tetrachloroethylene	10	10.1	101	8.6	86	16	70-130/30
79-01-6	Trichloroethylene	10	10.2	102	8.8	88	15	70-130/30
75-01-4	Vinyl chloride	10	10.9	109	9.4	94	15	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	97%	97%	78-124%

Duplicate Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N94118-2DUP	2W2089.D	1	03/28/05	YMH	n/a	n/a	V2W94
N94118-2	2W2088.D	1	03/28/05	YMH	n/a	n/a	V2W94

The QC reported here applies to the following samples: **Method:** TO-15

N94245-1, N94245-2, N94245-3, N94245-4

CAS No.	Compound	N94118-2 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	ND		ND		nc	12
74-87-3	Chloromethane	0.50		0.47		6	20
56-23-5	Carbon tetrachloride	ND		ND		nc	10
75-34-3	1,1-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethylene	ND		ND		nc	10
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	10
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	10
75-09-2	Methylene chloride	0.32		0.32		0	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	10
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethylene	0.99		1.0		1	12
79-01-6	Trichloroethylene	ND		ND		nc	10
75-01-4	Vinyl chloride	ND		ND		nc	10

CAS No.	Surrogate Recoveries	DUP	N94118-2	Limits
460-00-4	4-Bromofluorobenzene	98%	99%	78-124%

Duplicate Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
N93822-1DUP	2W2129.D	1	03/30/05	YMH	n/a	n/a	V2W96
N93822-1	2W2128.D	1	03/30/05	YMH	n/a	n/a	V2W96

The QC reported here applies to the following samples: **Method:** TO-15

N94245-1

CAS No.	Compound	N93822-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
75-00-3	Chloroethane	ND		ND		nc	10
67-66-3	Chloroform	0.20		0.20		0	12
74-87-3	Chloromethane	0.42		0.37		13	20
56-23-5	Carbon tetrachloride	ND		ND		nc	10
75-34-3	1,1-Dichloroethane	ND		ND		nc	10
75-35-4	1,1-Dichloroethylene	ND		ND		nc	10
107-06-2	1,2-Dichloroethane	ND		ND		nc	10
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	10
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	10
75-09-2	Methylene chloride	0.18	J	0.20		11	30
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	10
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	10
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	10
127-18-4	Tetrachloroethylene	0.69		0.73		6	12
79-01-6	Trichloroethylene	ND		ND		nc	10
75-01-4	Vinyl chloride	ND		ND		nc	10

CAS No.	Surrogate Recoveries	DUP	N93822-1	Limits
460-00-4	4-Bromofluorobenzene	99%	102%	78-124%

Summa Cleaning Certification

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W70-SCC	2W1619.D	1	02/11/05	MC	n/a	n/a	V2W70

The QC reported here (Summa A211) applies to the following samples: **Method:** TO-15

Batch CP1387 cleaned 02/07/05: N94245-4(A341)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	78-124%

Summa Cleaning Certification

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2W72-SCC	2W1661.D	1	02/15/05	MC	n/a	n/a	V2W72

The QC reported here (Summa A328) applies to the following samples: **Method:** TO-15

Batch CP1391 cleaned 02/11/05: N94245-1(A350), N94245-2(A138)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	94%	78-124%

Summa Cleaning Certification

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW207-SCC	W04774.D	1	02/16/05	WG	n/a	n/a	VW207

The QC reported here (Summa A196) applies to the following samples: **Method:** TO-15

Batch CP1392 cleaned 02/14/05: N94245-3(A200)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
127-18-4	Tetrachloroethylene	ND	0.20	ppbv		ND	1.4	ug/m3
79-01-6	Trichloroethylene	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	105%	78-124%

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W68-BFB
Lab File ID: 2W1579.D
Instrument ID: GCMS2W
Injection Date: 02/09/05
Injection Time: 08:32

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	23272	15.8		Pass
75	30.0 - 66.0% of mass 95	64101	43.6		Pass
95	Base peak, 100% relative abundance	147170	100.0		Pass
96	5.0 - 9.0% of mass 95	9702	6.6		Pass
173	Less than 2.0% of mass 174	617	0.42	(0.49) [a]	Pass
174	50.0 - 120.0% of mass 95	125813	85.5		Pass
175	4.0 - 9.01% of mass 174	9045	6.1	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	119925	81.5	(95.3) [a]	Pass
177	5.0 - 9.0% of mass 176	8157	5.5	(6.8) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W68-IC68	2W1580.D	02/09/05	09:18	00:46	Initial cal 0.2
V2W68-IC68	2W1581.D	02/09/05	10:05	01:33	Initial cal 0.5
V2W68-IC68	2W1582.D	02/09/05	10:51	02:19	Initial cal 2
V2W68-IC68	2W1583.D	02/09/05	12:50	04:18	Initial cal 5
V2W68-ICC68	2W1584.D	02/09/05	13:37	05:05	Initial cal 10
V2W68-IC68	2W1585.D	02/09/05	14:23	05:51	Initial cal 20
V2W68-IC68	2W1587.D	02/09/05	15:57	07:25	Initial cal 40

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W70-BFB
Lab File ID: 2W1613.D
Instrument ID: GCMS2W
Injection Date: 02/11/05
Injection Time: 08:30

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	18089	16.4		Pass
75	30.0 - 66.0% of mass 95	48562	44.1		Pass
95	Base peak, 100% relative abundance	109994	100.0		Pass
96	5.0 - 9.0% of mass 95	7584	6.9		Pass
173	Less than 2.0% of mass 174	489	0.44	(0.48) [a]	Pass
174	50.0 - 120.0% of mass 95	102778	93.4		Pass
175	4.0 - 9.01% of mass 174	7547	6.9	(7.3) [a]	Pass
176	93.0 - 101.0% of mass 174	100154	91.1	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	6561	6.0	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W70-CC68	2W1614.D	02/11/05	09:16	00:46	Continuing cal 10
V2W70-BS	2W1615.D	02/11/05	10:03	01:33	Blank Spike
V2W70-BSD	2W1616.D	02/11/05	10:50	02:20	Blank Spike Duplicate
V2W70-MB	2W1617.D	02/11/05	12:25	03:55	Method Blank
V2W70-SCC	2W1618.D	02/11/05	13:11	04:41	Summa Cleaning Certification
V2W70-SCC	2W1619.D	02/11/05	13:57	05:27	Summa Cleaning Certification
N90453-5	2W1620.D	02/11/05	14:44	06:14	(used for QC only; not part of job N94245)
N90453-5DUP	2W1621.D	02/11/05	15:40	07:10	Duplicate
ZZZZZZ	2W1624.D	02/11/05	18:00	09:30	(unrelated sample)
ZZZZZZ	2W1625.D	02/11/05	18:46	10:16	(unrelated sample)
ZZZZZZ	2W1626.D	02/11/05	19:32	11:02	(unrelated sample)
ZZZZZZ	2W1627.D	02/11/05	20:18	11:48	(unrelated sample)
ZZZZZZ	2W1628.D	02/11/05	21:03	12:33	(unrelated sample)
ZZZZZZ	2W1629.D	02/11/05	21:49	13:19	(unrelated sample)
ZZZZZZ	2W1630.D	02/11/05	22:35	14:05	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W72-BFB
Lab File ID: 2W1654.D
Instrument ID: GCMS2W
Injection Date: 02/15/05
Injection Time: 12:36

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	24989	18.1		Pass
75	30.0 - 66.0% of mass 95	66576	48.2		Pass
95	Base peak, 100% relative abundance	138141	100.0		Pass
96	5.0 - 9.0% of mass 95	9616	7.0		Pass
173	Less than 2.0% of mass 174	619	0.45	(0.51) [a]	Pass
174	50.0 - 120.0% of mass 95	122392	88.6		Pass
175	4.0 - 9.01% of mass 174	8608	6.2	(7.0) [a]	Pass
176	93.0 - 101.0% of mass 174	118778	86.0	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	7599	5.5	(6.4) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W72-CC68	2W1655.D	02/15/05	13:22	00:46	Continuing cal 10
V2W72-BS	2W1656.D	02/15/05	14:08	01:32	Blank Spike
V2W72-BSD	2W1657.D	02/15/05	14:55	02:19	Blank Spike Duplicate
V2W72-MB	2W1658.D	02/15/05	15:41	03:05	Method Blank
N90638-5	2W1659.D	02/15/05	16:46	04:10	(used for QC only; not part of job N94245)
N90638-5DUP	2W1660.D	02/15/05	17:32	04:56	Duplicate
V2W72-SCC	2W1661.D	02/15/05	18:18	05:42	Summa Cleaning Certification
ZZZZZZ	2W1666.D	02/15/05	22:16	09:40	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W91-BFB
Lab File ID: 2W2022.D
Instrument ID: GCMS2W
Injection Date: 03/23/05
Injection Time: 12:33

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	44312	20.4		Pass
75	30.0 - 66.0% of mass 95	112032	51.5		Pass
95	Base peak, 100% relative abundance	217472	100.0		Pass
96	5.0 - 9.0% of mass 95	15096	6.9		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	188992	86.9		Pass
175	4.0 - 9.01% of mass 174	13700	6.3	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	185472	85.3	(98.1) [a]	Pass
177	5.0 - 9.0% of mass 176	12192	5.6	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W91-IC91	2W2024.D	03/23/05	14:06	01:33	Initial cal 0.5
V2W91-IC91	2W2025.D	03/23/05	14:53	02:20	Initial cal 2
V2W91-IC91	2W2026.D	03/23/05	15:39	03:06	Initial cal 40
V2W91-IC91	2W2028.D	03/23/05	17:12	04:39	Initial cal 20
V2W91-ICC91	2W2030.D	03/23/05	18:44	06:11	Initial cal 10
V2W91-IC91	2W2031.D	03/23/05	19:30	06:57	Initial cal 5.0
V2W91-IC91	2W2032.D	03/23/05	20:16	07:43	Initial cal 0.2
V2W91-BS	2W2033.D	03/23/05	21:03	08:30	Blank Spike
V2W91-BSD	2W2034.D	03/23/05	21:49	09:16	Blank Spike Duplicate
V2W91-MB	2W2035.D	03/23/05	22:35	10:02	Method Blank

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W94-BFB
Lab File ID: 2W2080.D
Instrument ID: GCMS2W
Injection Date: 03/28/05
Injection Time: 09:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	48736	21.6		Pass
75	30.0 - 66.0% of mass 95	122066	54.2		Pass
95	Base peak, 100% relative abundance	225109	100.0		Pass
96	5.0 - 9.0% of mass 95	16247	7.2		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	191210	84.9		Pass
175	4.0 - 9.01% of mass 174	14134	6.3	(7.4) [a]	Pass
176	93.0 - 101.0% of mass 174	184021	81.7	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	12168	5.4	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W94-CC91	2W2082.D	03/28/05	11:39	02:16	Continuing cal 10
V2W94-BS	2W2083.D	03/28/05	12:49	03:26	Blank Spike
V2W94-BSD	2W2085.D	03/28/05	14:22	04:59	Blank Spike Duplicate
V2W94-MB	2W2086.D	03/28/05	15:58	06:35	Method Blank
ZZZZZZ	2W2087.D	03/28/05	16:45	07:22	(unrelated sample)
N94118-2	2W2088.D	03/28/05	17:31	08:08	(used for QC only; not part of job N94245)
N94118-2DUP	2W2089.D	03/28/05	18:17	08:54	Duplicate
ZZZZZZ	2W2090.D	03/28/05	19:03	09:40	(unrelated sample)
ZZZZZZ	2W2091.D	03/28/05	19:49	10:26	(unrelated sample)
ZZZZZZ	2W2092.D	03/28/05	20:36	11:13	(unrelated sample)
N94245-1	2W2093.D	03/28/05	21:23	12:00	IA-11
N94245-2	2W2094.D	03/28/05	22:09	12:46	IA-12
N94245-3	2W2095.D	03/28/05	22:55	13:32	IA-13
N94245-4	2W2096.D	03/28/05	23:42	14:19	IA-14
ZZZZZZ	2W2097.D	03/29/05	00:28	15:05	(unrelated sample)
ZZZZZZ	2W2098.D	03/29/05	01:15	15:52	(unrelated sample)
ZZZZZZ	2W2099.D	03/29/05	02:01	16:38	(unrelated sample)
ZZZZZZ	2W2100.D	03/29/05	02:47	17:24	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample:	V2W96-BFB	**Injection Date:**	03/30/05
Lab File ID:	2W2121.D	**Injection Time:**	08:49
Instrument ID:	GCMS2W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	46962	22.3		Pass
75	30.0 - 66.0% of mass 95	118504	56.4		Pass
95	Base peak, 100% relative abundance	210133	100.0		Pass
96	5.0 - 9.0% of mass 95	14535	6.9		Pass
173	Less than 2.0% of mass 174	0	0.0	(0.0) [a]	Pass
174	50.0 - 120.0% of mass 95	187242	89.1		Pass
175	4.0 - 9.01% of mass 174	13554	6.5	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	180864	86.1	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	11839	5.6	(6.5) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2W96-CC91	2W2122.D	03/30/05	09:35	00:46	Continuing cal 10
V2W96-BS	2W2123.D	03/30/05	10:21	01:32	Blank Spike
V2W96-BSD	2W2124.D	03/30/05	11:07	02:18	Blank Spike Duplicate
V2W96-MB	2W2125.D	03/30/05	11:54	03:05	Method Blank
V2W96-SCC	2W2126.D	03/30/05	12:41	03:52	Summa Cleaning Certification
N93822-1	2W2128.D	03/30/05	14:13	05:24	(used for QC only; not part of job N94245)
N93822-1DUP	2W2129.D	03/30/05	14:59	06:10	Duplicate
ZZZZZZ	2W2130.D	03/30/05	15:56	07:07	(unrelated sample)
ZZZZZZ	2W2131.D	03/30/05	16:42	07:53	(unrelated sample)
ZZZZZZ	2W2132.D	03/30/05	17:28	08:39	(unrelated sample)
ZZZZZZ	2W2133.D	03/30/05	18:14	09:25	(unrelated sample)
ZZZZZZ	2W2134.D	03/30/05	19:00	10:11	(unrelated sample)
ZZZZZZ	2W2135.D	03/30/05	19:46	10:57	(unrelated sample)
ZZZZZZ	2W2136.D	03/30/05	20:33	11:44	(unrelated sample)
ZZZZZZ	2W2137.D	03/30/05	21:19	12:30	(unrelated sample)
ZZZZZZ	2W2138.D	03/30/05	22:05	13:16	(unrelated sample)
ZZZZZZ	2W2140.D	03/30/05	23:37	14:48	(unrelated sample)
ZZZZZZ	2W2141.D	03/31/05	00:23	15:34	(unrelated sample)
ZZZZZZ	2W2142.D	03/31/05	01:09	16:20	(unrelated sample)
N94245-1	2W2143.D	03/31/05	01:57	17:08	IA-11

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample:	VW206-BFB	**Injection Date:**	02/14/05
Lab File ID:	W04752.D	**Injection Time:**	09:19
Instrument ID:	GCMSW		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	57522	16.0		Pass
75	30.0 - 66.0% of mass 95	161813	44.9		Pass
95	Base peak, 100% relative abundance	360234	100.0		Pass
96	5.0 - 9.0% of mass 95	24509	6.8		Pass
173	Less than 2.0% of mass 174	1580	0.44	(0.5) [a]	Pass
174	50.0 - 120.0% of mass 95	316992	88.0		Pass
175	4.0 - 9.01% of mass 174	22674	6.3	(7.2) [a]	Pass
176	93.0 - 101.0% of mass 174	309354	85.9	(97.6) [a]	Pass
177	5.0 - 9.0% of mass 176	20232	5.6	(6.5) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW206-IC206	W04753.D	02/14/05	10:10	00:51	Initial cal 0.2
VW206-IC206	W04754.D	02/14/05	11:04	01:45	Initial cal 0.5
VW206-IC206	W04756.D	02/14/05	12:47	03:28	Initial cal 5
VW206-IC206	W04757.D	02/14/05	13:38	04:19	Initial cal 2
VW206-ICC206	W04758.D	02/14/05	14:30	05:11	Initial cal 10
VW206-IC206	W04759.D	02/14/05	15:21	06:02	Initial cal 20
VW206-IC206	W04762.D	02/14/05	17:04	07:45	Initial cal 40

Instrument Performance Check (BFB)

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: VW207-BFB
Lab File ID: W04769.D
Instrument ID: GCMSW
Injection Date: 02/16/05
Injection Time: 08:51

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	52562	19.4		Pass
75	30.0 - 66.0% of mass 95	131752	48.7		Pass
95	Base peak, 100% relative abundance	270293	100.0		Pass
96	5.0 - 9.0% of mass 95	19144	7.1		Pass
173	Less than 2.0% of mass 174	1169	0.43	(0.53) [a]	Pass
174	50.0 - 120.0% of mass 95	222037	82.1		Pass
175	4.0 - 9.01% of mass 174	15632	5.8	(7.0) [a]	Pass
176	93.0 - 101.0% of mass 174	214613	79.4	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	14270	5.3	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VW207-CC206	W04770.D	02/16/05	09:44	00:53	Continuing cal 10
VW207-BS	W04771.D	02/16/05	10:35	01:44	Blank Spike
VW207-BSD	W04772.D	02/16/05	11:27	02:36	Blank Spike Duplicate
VW207-MB	W04773.D	02/16/05	12:19	03:28	Method Blank
VW207-SCC	W04774.D	02/16/05	13:11	04:20	Summa Cleaning Certification
ZZZZZZ	W04778.D	02/16/05	16:52	08:01	(unrelated sample)
ZZZZZZ	W04781.D	02/16/05	19:28	10:37	(unrelated sample)
ZZZZZZ	W04782.D	02/16/05	20:19	11:28	(unrelated sample)
ZZZZZZ	W04783.D	02/16/05	21:11	12:20	(unrelated sample)
ZZZZZZ	W04784.D	02/16/05	22:02	13:11	(unrelated sample)
ZZZZZZ	W04785.D	02/16/05	22:54	14:03	(unrelated sample)
ZZZZZZ	W04786.D	02/16/05	23:46	14:55	(unrelated sample)
ZZZZZZ	W04787.D	02/17/05	00:38	15:47	(unrelated sample)
ZZZZZZ	W04789.D	02/17/05	02:21	17:30	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std:	V2W70-CC68	**Injection Date:**	02/11/05
Lab File ID:	2W1614.D	**Injection Time:**	09:16
Instrument ID:	GCMS2W	**Method:**	TO-15

	IS 1 AREA	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**
Check Std	189685	10.22	922319	11.95	809069	16.16
Upper Limit [a]	265559	10.55	1291247	12.28	1132697	16.49
Lower Limit [b]	113811	9.89	553391	11.62	485441	15.83

Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**
V2W70-BS	226393	10.21	1111191	11.95	958567	16.16
V2W70-BSD	244873	10.21	1185928	11.95	1011688	16.16
V2W70-MB	209601	10.22	1004933	11.95	806554	16.16
V2W70-SCC	194002	10.21	957249	11.95	789462	16.16
V2W70-SCC	186975	10.22	898751	11.95	749099	16.16
N90453-5	184359	10.22	919063	11.95	769144	16.16
N90453-5DUP	207657	10.22	1010838	11.95	833697	16.16
ZZZZZZ	196228	10.21	960251	11.95	799647	16.16
ZZZZZZ	224375	10.21	1113620	11.95	843275	16.16
ZZZZZZ	191381	10.21	871041	11.95	719364	16.16
ZZZZZZ	186704	10.22	802195	11.95	657160	16.16
ZZZZZZ	182938	10.23	858149	11.95	661061	16.16
ZZZZZZ	223642	10.24	1121325	11.96	877535	16.16
ZZZZZZ	211377	10.22	1048615	11.95	812976	16.16

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std: V2W72-CC68
Lab File ID: 2W1655.D
Instrument ID: GCMS2W
Injection Date: 02/15/05
Injection Time: 13:22
Method: TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	224319	10.21	1123449	11.94	984415	16.15
Upper Limit [a]	314047	10.54	1572829	12.27	1378181	16.48
Lower Limit [b]	134591	9.88	674069	11.61	590649	15.82

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V2W72-BS	239243	10.21	1212524	11.94	1029935	16.15
V2W72-BSD	250493	10.21	1218611	11.94	1021764	16.15
V2W72-MB	242882	10.21	1189413	11.94	967704	16.15
N90638-5	207424	10.21	1007137	11.94	841892	16.15
N90638-5DUP	203342	10.21	977319	11.94	820291	16.15
V2W72-SCC	199362	10.21	953960	11.94	766750	16.15
ZZZZZZ	156915	10.21	732317	11.94	618393	16.15

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std:	V2W94-CC91	**Injection Date:**	03/28/05
Lab File ID:	2W2082.D	**Injection Time:**	11:39
Instrument ID:	GCMS2W	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	310601	10.13	1674452	11.86	1528692	16.06
Upper Limit [a]	434841	10.46	2344233	12.19	2140169	16.39
Lower Limit [b]	186361	9.80	1004671	11.53	917215	15.73

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V2W94-BS	327175	10.12	1731291	11.86	1543933	16.06
V2W94-BSD	358895	10.12	1910832	11.86	1679329	16.06
V2W94-MB	303609	10.12	1582665	11.84	1367165	16.05
ZZZZZZ	291988	10.12	1523117	11.84	1341837	16.05
N94118-2	310436	10.12	1620379	11.85	1433061	16.05
N94118-2DUP	340800	10.12	1776289	11.85	1549125	16.05
ZZZZZZ	326770	10.12	1679914	11.84	1463380	16.05
ZZZZZZ	331937	10.12	1735814	11.84	1480996	16.05
ZZZZZZ	308249	10.12	1613775	11.85	1427330	16.05
N94245-1 [c]	312647	10.12	1632421	11.84	1411503	16.05
N94245-2	304009	10.12	1600014	11.85	1414063	16.05
N94245-3	305424	10.12	1589457	11.84	1369383	16.05
N94245-4	296431	10.12	1544231	11.84	1347950	16.05
ZZZZZZ	306290	10.12	1594846	11.84	1385088	16.05
ZZZZZZ	300788	10.12	1582101	11.84	1397231	16.05
ZZZZZZ	306156	10.12	1619691	11.84	1407978	16.05
ZZZZZZ	300278	10.13	1577852	11.85	1410474	16.05

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.
(c) Summa returned with high vacuum(18"Hg) In-house limit is 15"Hg. Flow controller found outside correct range for proper sampling on return. Sample pressurized and data reported with raised RL's>

Volatile Internal Standard Area Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std:	V2W96-CC91	**Injection Date:**	03/30/05
Lab File ID:	2W2122.D	**Injection Time:**	09:35
Instrument ID:	GCMS2W	**Method:**	TO-15

	IS 1 AREA	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**
Check Std	266590	10.12	1431186	11.84	1321027	16.05
Upper Limit [a]	373226	10.45	2003660	12.17	1849438	16.38
Lower Limit [b]	159954	9.79	858712	11.51	792616	15.72

Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**
V2W96-BS	306235	10.12	1601164	11.84	1413828	16.05
V2W96-BSD	328549	10.12	1673248	11.84	1468343	16.05
V2W96-MB	303145	10.11	1544585	11.83	1322338	16.04
V2W96-SCC	267517	10.11	1374784	11.83	1182145	16.04
N93822-1	256682	10.12	1327512	11.84	1168859	16.04
N93822-1DUP	308273	10.12	1547717	11.84	1284566	16.04
ZZZZZZ	316827	10.11	1621924	11.83	1352357	16.04
ZZZZZZ	268426	10.10	1362600	11.83	1195372	16.04
ZZZZZZ	256146	10.11	1327971	11.84	1165680	16.04
ZZZZZZ	260643	10.11	1337196	11.83	1196290	16.04
ZZZZZZ	255959	10.10	1303956	11.83	1145289	16.04
ZZZZZZ	249999	10.11	1275551	11.84	1138522	16.04
ZZZZZZ	251282	10.10	1274203	11.83	1113525	16.04
ZZZZZZ	246612	10.10	1248487	11.83	1102613	16.04
ZZZZZZ	245965	10.10	1248070	11.83	1099736	16.04
ZZZZZZ	236857	10.11	1217673	11.83	1062284	16.04
ZZZZZZ	240247	10.11	1235581	11.83	1089174	16.04
ZZZZZZ	231155	10.11	1259520	11.84	1168890	16.04
N94245-1	297808	10.12	1511768	11.84	1309621	16.04

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Internal Standard Area Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Check Std:	VW207-CC206	**Injection Date:**	02/16/05
Lab File ID:	W04770.D	**Injection Time:**	09:44
Instrument ID:	GCMSW	**Method:**	TO-15

	IS 1		**IS 2**		**IS 3**	
	AREA	**RT**	**AREA**	**RT**	**AREA**	**RT**
Check Std	414672	10.58	2062965	12.34	1738344	16.52
Upper Limit [a]	580541	10.91	2888151	12.67	2433682	16.85
Lower Limit [b]	248803	10.25	1237779	12.01	1043006	16.19

Lab	**IS 1**		**IS 2**		**IS 3**	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**
VW207-BS	438856	10.58	2139668	12.34	1769140	16.52
VW207-BSD	487541	10.58	2429517	12.34	2028117	16.52
VW207-MB	509571	10.57	2358784	12.33	1934551	16.52
VW207-SCC	363108	10.58	1762809	12.33	1424830	16.52
ZZZZZZ	341279	10.59	1646408	12.34	1315921	16.52
ZZZZZZ	334796	10.58	1622281	12.33	1336585	16.52
ZZZZZZ	338498	10.57	1607031	12.33	1322938	16.52
ZZZZZZ	320493	10.57	1555748	12.33	1256100	16.52
ZZZZZZ	327077	10.57	1581901	12.33	1309366	16.52
ZZZZZZ	318682	10.57	1532104	12.33	1231455	16.52
ZZZZZZ	318370	10.58	1523765	12.33	1222009	16.52
ZZZZZZ	310037	10.59	1510651	12.34	1232356	16.52
ZZZZZZ	487082	10.58	2271489	12.34	1763226	16.52

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = +40% of check standard area; Retention time +0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Volatile Surrogate Recovery Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
N94245-1	2W2143.D	99.0
N94245-1	2W2093.D	99.0
N94245-2	2W2094.D	99.0
N94245-3	2W2095.D	99.0
N94245-4	2W2096.D	101.0
N93822-1DUP	2W2129.D	99.0
N94118-2DUP	2W2089.D	98.0
V2W70-SCC	2W1619.D	94.0
V2W72-SCC	2W1661.D	94.0
V2W94-BS	2W2083.D	101.0
V2W94-BSD	2W2085.D	98.0
V2W94-MB	2W2086.D	99.0
V2W96-BS	2W2123.D	100.0
V2W96-BSD	2W2124.D	99.0
V2W96-MB	2W2125.D	98.0
VW207-SCC	W04774.D	105.0
V2W70-MB	2W1617.D	93.0
V2W72-MB	2W1658.D	94.0
VW207-MB	W04773.D	105.0

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	78-124%

Initial Calibration Summary Page 1 of 2

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W68-ICC68
Lab FileID: 2W1584.D

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                     Response Factor Report  MS2W

 Method         : C:\MSDCHEM\1\METHODS\M2W068.M (RTE Integrator)
 Title          :  TO15  by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
 Last Update    : Wed Feb 09 16:40:22 2005
 Response via   : Initial Calibration

 Calibration Files
 0.2 =2W1580.D    0.5 =2W1581.D    2.0 =2W1582.D    5.0 =2W1583.D
 10. =2W1584.D   20. =2W1585.D   40. =2W1587.D   99  =2W1586.D

 Compound         0.2   0.5   2.0   5.0   10.   20.   40.   99   Avg %RSD
 ---------------------------------------------------------------------------

  1) I   BROMOCHLOROMETHANE     ----------------ISTD---------------------
  2) DICHLORODIFL 4.533 4.518 4.726 4.811 4.779 4.527 4.337        4.604   3.74
  3) PROPYLENE    2.067 1.809 1.524 1.456 1.456 1.337 1.276        1.561  17.97
  4) FREON 114    5.329 5.400 5.599 5.940 5.850 5.805 5.485        5.630   4.23
  5) CHLOROMETHAN 1.797 1.709 1.702 1.717 1.720 1.579 1.499        1.675   6.03
  6) VINYL CHLORI 1.981 1.925 1.998 2.082 2.030 1.959 1.791        1.967   4.69
  7) 1,3-BUTADIEN 1.458 1.362 1.473 1.579 1.526 1.488 1.336        1.460   5.91
  8) BROMOMETHANE 1.801 1.760 1.862 1.970 1.942 2.001 1.750        1.870   5.51
  9) CHLOROETHANE 0.891 0.894 0.957 1.000 0.961 1.006 0.883        0.942   5.55
 10) TRICHLOROFLU 3.640 3.442 3.713 3.898 3.729 3.899 3.857        3.740   4.41
 11) ISOPROPYL AL 2.608 2.109 2.099 2.209 2.313 1.972              2.218  10.02
 12) ACETONE      0.750 0.634 0.828 0.642 0.650 0.642 0.597        0.677  11.98
 13) PENTANE      1.697 1.675 1.719 1.697 1.637 1.634 1.608        1.667   2.45
 14) 1,1-DICHLORO 1.525 1.556 1.629 1.660 1.611 1.602 1.617        1.600   2.85
 15) CARBON DISUL 4.558 4.228 4.324 4.331 4.210 4.046 4.091        4.255   4.02
 16) ETHANOL      0.788 0.631 0.552 0.529 0.530 0.491              0.587  18.55
 17) BROMOETHENE  1.742 1.728 1.787 1.975 1.892 1.962 1.841        1.847   5.43
 18) METHYLENE CH 1.651 1.514 1.507 1.465 1.426 1.372 1.392        1.475   6.39
 19) 3-CHLOROPROP 0.472 0.511 0.592 0.572 0.574 0.584 0.574        0.554   8.07
 20) FREON 113    2.697 2.733 2.938 2.817 2.753 2.886 3.077        2.843   4.71
 21) TRANS-1,2-DI 1.653 1.518 1.621 1.608 1.593 1.604 1.635        1.604   2.68
 22) TERTIARY BUT 2.455 2.244 2.092 2.470 2.712 2.043              2.336  10.95
 23) METHYL TERTI 2.604 2.389 3.235 3.076 3.243 3.325 3.207        3.011  12.11
 24) TETRAHYDROFU 1.258 1.226 1.634 1.363 1.403 1.395 1.372        1.379   9.55
 25) HEXANE       2.144 2.169 2.357 2.371 2.325 2.458 2.560        2.340   6.32
 26) VINYL ACETAT 0.196 0.210 0.298 0.281 0.291 0.296 0.292        0.266  16.50
 27) 1,1-DICHLORO 2.094 2.125 2.451 2.346 2.398 2.480 2.455        2.336   6.88
 28) METHYL ETHYL 0.495 0.472 0.659 0.626 0.644 0.643 0.626        0.595  12.99
 29) cis-1,2-DICH 1.434 1.375 1.502 1.464 1.493 1.537 1.566        1.481   4.32
 30) ETHYL ACETAT 0.341 0.316 0.434 0.382 0.404 0.422 0.441        0.392  12.24
 31) CHLOROFORM   2.523 2.634 2.872 2.866 2.895 2.966 3.040        2.828   6.49
 32) 1,1,1-TRICHL 2.139 2.249 2.592 2.533 2.658 2.878 3.034        2.583  12.31
 33) CARBON TETRA 2.727 2.865 3.080 3.172 3.192 3.516 3.839        3.199  11.83
 34) 1,2-DICHLORO 1.139 1.150 1.351 1.357 1.374 1.460 1.489        1.331  10.36

 35) I   1,4-DIFLUOROBENZENE    ----------------ISTD---------------------
 36) BENZENE      0.681 0.690 0.827 0.807 0.812 0.830 0.866        0.788   9.17
 37) CYCLOHEXANE  0.445 0.425 0.442 0.424 0.419 0.425 0.448        0.433   2.77
 38) TRICHLOROETH 0.338 0.363 0.397 0.420 0.423 0.462 0.481        0.412  12.35
 39) 1,2-DICHLORO 0.257 0.246 0.299 0.288 0.294 0.299 0.322        0.286   9.11
 40) BROMODICHLOR 0.443 0.459 0.562 0.565 0.589 0.652 0.703        0.568  16.59
 41) 2,2,4-TRIMET 1.157 1.314 1.471 1.495 1.511 1.586 1.568        1.443  10.69
 42) 1,4-DIOXANE  0.148 0.137 0.106 0.134 0.134 0.132              0.132  10.50
 43) HEPTANE      0.522 0.510 0.561 0.572 0.564 0.587 0.591        0.558   5.53
 44) METHYL ISOBU 0.630 0.480 0.611 0.592 0.657 0.632 0.656        0.608  10.02
 45) cis-1,3-DICH 0.361 0.351 0.425 0.420 0.434 0.474 0.514        0.426  13.62
```

Initial Calibration Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W68-ICC68
Lab FileID: 2W1584.D

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 46) TOLUENE        0.454 0.464 0.580 0.561 0.582 0.630 0.686          0.565  14.80
 47) trans-1,3-DI   0.363 0.342 0.408 0.408 0.432 0.456 0.503          0.416  13.14
 48) 1,1,2-TRICHL   0.247 0.242 0.303 0.290 0.302 0.323 0.350          0.294  13.21

 49) I   CHLOROBENZENE-D5       ----------------ISTD---------------------
 50) 2-HEXANONE     0.998 0.577 0.680 0.639 0.714 0.707 0.753          0.724  18.46
 51) TETRACHLOROE   0.424 0.437 0.488 0.505 0.515 0.563 0.601          0.505  12.59
 52) DIBROMOCHLOR   0.533 0.543 0.686 0.709 0.736 0.835 0.900          0.706  19.38
 53) 1,2-DIBROMOE   0.488 0.469 0.569 0.578 0.588 0.676 0.743          0.587  16.54
 54) CHLOROBENZEN   0.807 0.766 0.895 0.875 0.887 1.005 1.101          0.905  12.63
 55) ETHYLBENZENE   1.113 1.075 1.421 1.382 1.469 1.607 1.722          1.398  17.02
 56) m,p-XYLENE     0.445 0.418 0.567 0.559 0.601 0.673 0.711          0.568  19.05
 57) o-XYLENE       0.426 0.401 0.562 0.551 0.584 0.649 0.683          0.551  19.11
 58) STYRENE        0.604 0.565 0.789 0.811 0.876 0.978 1.075          0.814  22.73
 59) NONANE         0.697 0.681 0.864 0.849 0.900 0.908 0.856          0.822  11.41
 60) BROMOFORM      0.518 0.495 0.652 0.685 0.749 0.847 0.915          0.694  22.61
 61) 4-BROMOFLUOR   0.610 0.616 0.631 0.654 0.643 0.651 0.640          0.635   2.67
 62) 1,1,2,2-TETR   0.742 0.655 0.867 0.863 0.946 0.998 1.019          0.870  15.37
 63) ISOPROPYLBEN   1.261 1.143 1.583 1.565 1.699 1.829 1.903          1.569  17.88
 64) 2-CHLOROTOLU   0.936 0.885 1.130 1.141 1.241 1.351 1.438          1.160  17.51
 65) 4-ETHYLTOLUE   1.025 1.101 1.530 1.534 1.695 1.807 1.891          1.512  22.12
 66) 1,3,5-TRIMET   1.027 0.911 1.243 1.220 1.360 1.473 1.534          1.253  18.08
 67) 1,2,4-TRIMET   1.017 0.887 1.235 1.212 1.355 1.465 1.540          1.244  18.81
 68) m-DICHLOROBE   0.824 0.723 0.898 0.906 0.985 1.071 1.119          0.932  14.80
 69) BENZYL CHLOR   0.949 0.790 1.121 1.173 1.305 1.382 1.454          1.168  20.36
 70) p-DICHLOROBE   0.819 0.718 0.850 0.877 0.954 1.019 1.105          0.906  14.39
 71) o-DICHLOROBE   0.749 0.662 0.830 0.821 0.908 0.964 1.039          0.853  15.06
 72) HEXACHLOROBU   0.432 0.366 0.508 0.565 0.677 0.625 0.592          0.538  20.37
 73) 1,2,4-TRICHL   0.416 0.297 0.421 0.553 0.689 0.653 0.700          0.533  29.61
 74) NAPHTHALENE                                                0.823  0.823   0.00
-------------------------------------------------------------------------------------
(#) = Out of Range   ###  Number of calibration levels exceeded format  ###

        M2W068.M          Tue Feb 15 14:52:06 2005    MS2W
```

Continuing Calibration Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W70-CC68
Lab FileID: 2W1614.D

```
                    Evaluate Continuing Calibration Report

  Data File : C:\MSDCHEM\1\DATA\2W1614.D                  Vial: 4
  Acq On    : 11 Feb 2005   9:16 am                   Operator: MICHAELC
  Sample    : CC68-10                                 Inst     : MS2W
  Misc      : MS10619,V2W70,,,,,1                     Multiplr: 1.00
  MS Integration Params: RTEINT6.P

  Method         : C:\MSDCHEM\1\METHODS\M2W068.M (RTE Integrator)
  Title          :  TO15  by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
  Last Update    : Wed Feb 09 16:40:22 2005
  Response via   : Multiple Level Calibration

  Min. RRF      :   0.000  Min. Rel. Area :  25%  Max. R.T. Dev  0.30min
  Max. RRF Dev :  30%     Max. Rel. Area : 200%

         Compound                        AvgRF    CCRF      %Dev Area%  Dev(min)R.T.
 ---------------------------------------------------------------------------------
  1 I   BROMOCHLOROMETHANE              1.000    1.000       0.0   84   0.00    10.22
  2 m   DICHLORODIFLUOROMETHANE         4.604    4.581       0.5   81   0.00     5.58
  3 m   PROPYLENE                       1.561    1.485       4.9   86   0.00     5.49
  4 m   FREON 114                       5.630    5.513       2.1   79   0.00     5.91
  5 m   CHLOROMETHANE                   1.675    1.687      -0.7   83   0.00     5.79
  6 m   VINYL CHLORIDE                  1.967    1.958       0.5   81   0.00     6.05
  7 m   1,3-BUTADIENE                   1.460    1.434       1.8   79   0.00     6.22
  8 m   BROMOMETHANE                    1.870    1.851       1.0   80   0.00     6.53
  9 m   CHLOROETHANE                    0.942    0.949      -0.7   83   0.00     6.72
 10 m   TRICHLOROFLUOROMETHANE          3.740    3.652       2.4   82   0.00     7.51
 11 m   ISOPROPYL ALCOHOL               2.218    2.291      -3.3   83   0.00     7.54
 12 T   ACETONE                         0.677    0.608      10.2   79   0.00     7.34
 13 T   PENTANE                         1.667    1.669      -0.1   86   0.00     7.86
 14 m   1,1-DICHLOROETHYLENE            1.600    1.629      -1.8   85   0.00     8.14
 15 T   CARBON DISULFIDE                4.255    4.303      -1.1   86   0.00     8.59
 16 m   ETHANOL                         0.587    0.558       4.9   89   0.00     6.83
 17 T   BROMOETHENE                     1.847    1.762       4.6   78   0.00     7.09
 18 m   METHYLENE CHLORIDE              1.475    1.451       1.6   86   0.00     8.22
 19 T   3-CHLOROPROPENE                 0.554    0.550       0.7   81   0.00     8.35
 20 m   FREON 113                       2.843    2.806       1.3   86   0.00     8.48
 21 T   TRANS-1,2-DICHLOROETHYLEN       1.604    1.600       0.2   85   0.00     9.11
 22 T   TERTIARY BUTYL ALCOHOL          2.336    2.544      -8.9   79   0.00     8.13
 23 m   METHYL TERTIARY BUTYL ETH       3.011    2.972       1.3   77   0.00     9.36
 24 m   TETRAHYDROFURAN                 1.379    1.342       2.7   81   0.00    10.74
 25 T   HEXANE                          2.340    2.349      -0.4   85   0.00    10.25
 26 T   VINYL ACETATE                   0.266    0.256       3.8   74   0.00     9.39
 27 m   1,1-DICHLOROETHANE              2.336    2.275       2.6   80   0.00     9.31
 28 T   METHYL ETHYL KETONE             0.595    0.627      -5.4   82   0.00     9.65
 29 m   cis-1,2-DICHLOROETHYLENE        1.481    1.455       1.8   82   0.00    10.06
 30 m   ETHYL ACETATE                   0.392    0.383       2.3   80   0.00    10.22
 31 T   CHLOROFORM                      2.828    2.843      -0.5   83   0.00    10.32
 32 m   1,1,1-TRICHLOROETHANE           2.583    2.445       5.3   77   0.00    11.27
 33 m   CARBON TETRACHLORIDE            3.199    3.108       2.8   82   0.00    11.83
 34 m   1,2-DICHLOROETHANE              1.331    1.239       6.9   76   0.00    11.02

 35 I   1,4-DIFLUOROBENZENE             1.000    1.000       0.0   81   0.00    11.95
 36 m   BENZENE                         0.788    0.793      -0.6   79   0.00    11.69
 37 m   CYCLOHEXANE                     0.433    0.429       0.9   83   0.00    11.96
 38 m   TRICHLOROETHYLENE               0.412    0.432      -4.9   82   0.00    12.64
 39 T   1,2-DICHLOROPROPANE             0.286    0.287      -0.3   79   0.00    12.43
 40 T   BROMODICHLOROMETHANE            0.568    0.568       0.0   78   0.00    12.59
 41 T   2,2,4-TRIMETHYLPENTANE          1.443    1.531      -6.1   82   0.00    12.67
```

Continuing Calibration Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W70-CC68
Lab FileID: 2W1614.D

42	m	1,4-DIOXANE	0.132	0.151	-14.4	91	0.00	12.64
43	m	HEPTANE	0.558	0.592	-6.1	85	0.00	12.87
44	T	METHYL ISOBUTYL KETONE	0.608	0.645	-6.1	79	0.00	13.44
45	T	cis-1,3-DICHLOROPROPENE	0.426	0.422	0.9	78	0.00	13.41
46	T	TOLUENE	0.565	0.559	1.1	78	0.00	14.39
47	T	trans-1,3-DICHLOROPROPENE	0.416	0.410	1.4	76	0.00	13.89
48	T	1,1,2-TRICHLOROETHANE	0.294	0.295	-0.3	79	0.00	14.10
49	I	CHLOROBENZENE-D5	1.000	1.000	0.0	79	0.00	16.16
50	T	2-HEXANONE	0.724	0.719	0.7	80	0.00	14.58
51	T	TETRACHLOROETHYLENE	0.505	0.516	-2.2	79	0.00	15.51
52	T	DIBROMOCHLOROMETHANE	0.706	0.711	-0.7	77	0.00	14.81
53	T	1,2-DIBROMOETHANE	0.587	0.580	1.2	78	0.00	15.07
54	T	CHLOROBENZENE	0.905	0.883	2,4	79	0.00	16.21
55	T	ETHYLBENZENE	1.398	1.387	0.8	75	0.00	16.57
56	T	m,p-XYLENE	0.568	0.561	1.2	74	0.00	16.74
57	T	o-XYLENE	0.551	0.555	-0.7	75	0.00	17.22
58	T	STYRENE	0.814	0.842	-3.4	76	0.00	17.10
59		NONANE	0.822	0.915	-11.3	81	0.00	17.36
60	T	BROMOFORM	0.694	0.717	-3.3	76	0.00	16.86
61	S	4-BROMOFLUOROBENZENE	0.635	0.626	1.4	77	0.00	17.67
62	T	1,1,2,2-TETRACHLOROETHANE	0.870	0.919	-5.6	77	0.00	17.19
63	T	ISOPROPYLBENZENE	1.569	1.602	-2.1	75	0.00	17.79
64	T	2-CHLOROTOLUENE	1.160	1.191	-2.7	76	0.00	18.29
65	T	4-ETHYLTOLUENE	1.512	1.616	-6.9	76	0.00	18.45
66	T	1,3,5-TRIMETHYLBENZENE	1.253	1.302	-3.9	76	0.00	18.52
67	T	1,2,4-TRIMETHYLBENZENE	1.244	1.306	-5.0	76	0.00	18.95
68	T	m-DICHLOROBENZENE	0.932	0.952	-2.1	77	0.00	19.14
69	T	BENZYL CHLORIDE	1.168	1.267	-8.5	77	0.00	19.10
70	T	p-DICHLOROBENZENE	0.906	0.944	-4.2	78	0.00	19.20
71	T	o-DICHLOROBENZENE	0.853	0.888	-4.1	77	0.00	19.56
72	T	HEXACHLOROBUTADIENE	0.538	0.658	-22.3	77	0.00	21.83
73		1,2,4-TRICHLOROBENZENE	0.533	0.686	-28.7	79	0.00	21.37

```
(#) = Out of Range              SPCC's out = 0  CCC's out = 0
 2W1584.D   M2W068.M         Fri Feb 11 15:46:56 2005   MS2W
```

Continuing Calibration Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W72-CC68
Lab FileID: 2W1655.D

```
                    Evaluate Continuing Calibration Report

 Data File : C:\MSDCHEM\1\DATA\2W1655.D                  Vial: 4
 Acq On    : 15 Feb 2005   1:22 pm                   Operator: MICHAELC
 Sample    : CC68-10                                 Inst    : MS2W
 Misc      : MS11011,V2W72,,,,,1                     Multiplr: 1.00
 MS Integration Params: RTEINT6.P

 Method        : C:\MSDCHEM\1\METHODS\M2W068.M (RTE Integrator)
 Title         :  TO15  by GCMS w/DB-1 60 m X .25 mm ID 1.0 um
 Last Update   : Wed Feb 09 16:40:22 2005
 Response via  : Multiple Level Calibration

 Min. RRF      :   0.000  Min. Rel. Area :  25%  Max. R.T. Dev  0.30min
 Max. RRF Dev :  30%     Max. Rel. Area : 200%

       Compound                         AvgRF    CCRF      %Dev Area%  Dev(min)R.T.
 -------------------------------------------------------------------------------
  1 I   BROMOCHLOROMETHANE               1.000    1.000       0.0  100  -0.01    10.21
  2 m   DICHLORODIFLUOROMETHANE          4.604    4.397       4.5   92  -0.01     5.58
  3 m   PROPYLENE                        1.561    1.267      18.8   87   0.00     5.49
  4 m   FREON 114                        5.630    5.114       9.2   87   0.00     5.91
  5 m   CHLOROMETHANE                    1.675    1.485      11.3   86   0.00     5.79
  6 m   VINYL CHLORIDE                   1.967    1.765      10.3   87   0.00     6.05
  7 m   1,3-BUTADIENE                    1.460    1.337       8.4   87   0.00     6.22
  8 m   BROMOMETHANE                     1.870    1.674      10.5   86   0.00     6.53
  9 m   CHLOROETHANE                     0.942    0.871       7.5   90   0.00     6.72
 10 m   TRICHLOROFLUOROMETHANE           3.740    3.653       2.3   98  -0.01     7.51
 11 m   ISOPROPYL ALCOHOL                2.218    2.176       1.9   94   0.00     7.54
 12 T   ACETONE                          0.677    0.582      14.0   89   0.00     7.34
 13 T   PENTANE                          1.667    1.524       8.6   93  -0.01     7.85
 14 m   1,1-DICHLOROETHYLENE             1.600    1.483       7.3   92   0.00     8.13
 15 T   CARBON DISULFIDE                 4.255    3.852       9.5   91  -0.01     8.58
 16 m   ETHANOL                          0.587    0.505      14.0   95   0.00     6.83
 17 T   BROMOETHENE                      1.847    1.654      10.4   87   0.00     7.09
 18 m   METHYLENE CHLORIDE               1.475    1.318      10.6   92   0.00     8.22
 19 T   3-CHLOROPROPENE                  0.554    0.513       7.4   89  -0.01     8.34
 20 m   FREON 113                        2.843    2.685       5.6   97   0.00     8.48
 21 T   TRANS-1,2-DICHLOROETHYLEN        1.604    1.476       8.0   92   0.00     9.11
 22 T   TERTIARY BUTYL ALCOHOL           2.336    2.526      -8.1   93   0.00     8.13
 23 m   METHYL TERTIARY BUTYL ETH        3.011    2.910       3.4   89   0.00     9.36
 24 m   TETRAHYDROFURAN                  1.379    1.233      10.6   88   0.00    10.74
 25 T   HEXANE                           2.340    2.211       5.5   95  -0.01    10.24
 26 T   VINYL ACETATE                    0.266    0.245       7.9   84   0.00     9.39
 27 m   1,1-DICHLOROETHANE               2.336    2.223       4.8   92  -0.01     9.30
 28 T   METHYL ETHYL KETONE              0.595    0.575       3.4   89   0.00     9.65
 29 m   cis-1,2-DICHLOROETHYLENE         1.481    1.362       8.0   91  -0.01    10.06
 30 m   ETHYL ACETATE                    0.392    0.370       5.6   91   0.00    10.21
 31 T   CHLOROFORM                       2.828    2.815       0.5   97  -0.01    10.32
 32 m   1,1,1-TRICHLOROETHANE            2.583    2.574       0.3   96  -0.01    11.26
 33 m   CARBON TETRACHLORIDE             3.199    3.241      -1.3  101  -0.01    11.83
 34 m   1,2-DICHLOROETHANE               1.331    1.321       0.8   96  -0.01    11.01

 35 I   1,4-DIFLUOROBENZENE              1.000    1.000       0.0   98  -0.01    11.94
 36 m   BENZENE                          0.788    0.718       8.9   87  -0.01    11.69
 37 m   CYCLOHEXANE                      0.433    0.385      11.1   90  -0.01    11.95
 38 m   TRICHLOROETHYLENE                0.412    0.406       1.5   94  -0.01    12.63
 39 T   1,2-DICHLOROPROPANE              0.286    0.260       9.1   87  -0.01    12.42
 40 T   BROMODICHLOROMETHANE             0.568    0.551       3.0   92  -0.01    12.59
 41 T   2,2,4-TRIMETHYLPENTANE           1.443    1.424       1.3   93  -0.01    12.67
```

Continuing Calibration Summary

Job Number: N94245
Account: GTIMAAN Shaw E & I, Inc.
Project: MADEP, Tufts Road, Somerville, MA

Sample: V2W72-CC68
Lab FileID: 2W1655.D

```
 42 m   1,4-DIOXANE                  0.132     0.137       -3.8  100   -0.01      12.64
 43 m   HEPTANE                      0.558     0.521        6.6   91   -0.01      12.86
 44 T   METHYL ISOBUTYL KETONE       0.608     0.580        4.6   87   -0.01      13.43
 45 T   cis-1,3-DICHLOROPROPENE      0.426     0.382       10.3   86   -0.01      13.41
 46 T   TOLUENE                      0.565     0.505       10.6   85   -0.01      14.38
 47 T   trans-1,3-DICHLOROPROPENE    0.416     0.380        8.7   86   -0.01      13.89
 48 T   1,1,2-TRICHLOROETHANE        0.294     0.265        9.9   86   -0.02      14.08

 49 I   CHLOROBENZENE-D5             1.000     1.000        0.0   96   -0.01      16.15
 50 T   2-HEXANONE                   0.724     0.660        8.8   89   -0.01      14.58
 51 T   TETRACHLOROETHYLENE          0.505     0.504        0.2   94   -0.01      15.51
 52 T   DIBROMOCHLOROMETHANE         0.706     0.676        4.2   89   -0.01      14.80
 53 T   1,2-DIBROMOETHANE            0.587     0.530        9.7   87   -0.01      15.06
 54 T   CHLOROBENZENE                0.905     0.794       12.3   86   -0.01      16.20
 55 T   ETHYLBENZENE                 1.398     1.237       11.5   81   -0.01      16.56
 56 T   m,p-XYLENE                   0.568     0.510       10.2   82   -0.01      16.74
 57 T   o-XYLENE                     0.551     0.496       10.0   82   -0.01      17.21
 58 T   STYRENE                      0.814     0.738        9.3   81   -0.01      17.09
 59     NONANE                       0.822     0.771        6.2   83    0.00      17.36
 60 T   BROMOFORM                    0.694     0.688        0.9   89   -0.01      16.85
 61 S   4-BROMOFLUOROBENZENE         0.635     0.625        1.6   94   -0.01      17.66
 62 T   1,1,2,2-TETRACHLOROETHANE    0.870     0.795        8.6   81   -0.01      17.19
 63 T   ISOPROPYLBENZENE             1.569     1.432        8.7   81   -0.01      17.79
 64 T   2-CHLOROTOLUENE              1.160     1.041       10.3   81   -0.01      18.29
 65 T   4-ETHYLTOLUENE               1.512     1.415        6.4   81    0.00      18.45
 66 T   1,3,5-TRIMETHYLBENZENE       1.253     1.144        8.7   81   -0.01      18.51
 67 T   1,2,4-TRIMETHYLBENZENE       1.244     1.143        8.1   81   -0.01      18.94
 68 T   m-DICHLOROBENZENE            0.932     0.860        7.7   84   -0.01      19.13
 69 T   BENZYL CHLORIDE              1.168     1.084        7.2   80   -0.01      19.10
 70 T   p-DICHLOROBENZENE            0.906     0.839        7.4   85   -0.01      19.19
 71 T   o-DICHLOROBENZENE            0.853     0.786        7.9   83   -0.01      19.56
 72 T   HEXACHLOROBUTADIENE          0.538     0.667      -24.0   95   -0.01      21.82
 73     1,2,4-TRICHLOROBENZENE       0.533     0.634      -18.9   89    0.00      21.36
---------------------------------------------------------------------------------
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   (#) = Out of Range                  SPCC's out = 0   CCC's out = 0
    2W1584.D   M2W068.M          Thu Feb 17 15:55:57 2005   MS2W
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DEP

MASSACHUSETTS ARTMENT OF ENVIRONMENTAL PROTECTIO

Northeast Regional Office/Bureau of Waste Site Cleanup

INDOOR AIR SCREENING/SAMPLING FORM

RELEASE TRACKING NUMBER 3- 24376

TOWN Somerville

Address: 9 Tufts St.

Name/Identifier: Campos Avani

BUILDING INFORMATION (check all that apply)

Type of Building: ☑ Residential ☐ Commercial ☐ Industrial ☐ Mixed ☐ Other: 6 apt

Foundation Type: ☐ Finished Basement ☑ Full Basement ☐ Partial Basement/Crawl Space ☐ Slab-on-Grade

Foundation Material(s): ☑ Fieldstone ☐ Concrete Block ☐ Poured Concrete ☐ Other: brick

Foundation Integrity: ☐ No Cracks/Open Joints ☑ Moderate Cracks/Open Joints ☐ Many Cracks/Open Joints

Basement/Slab Floor: ☐ Concrete/Good Integrity ☐ Concrete with Cracks ☐ Earthen Floor ☐ Carpet/Flooring

Basement Use: ☑ Storage/Infrequent Use ☐ Recreation/Living Space ☐ Bedrooms ☐ Other: ____

Drainage Sump Present: ☐ No ☐ Yes Standing Water in Sump? ☑ No ☐ Yes Product in Sump? ☑ No ☐ Yes

Ducted Heating/Cooling (HVAC) System? ☐ No ☐ Yes HVAC Air Intake in Basement? ☐ No ☐ Yes

Open windows in sampling area(s)? ☑ No ☐ Yes Odors in basement/building? ☐ No ☑ Yes (describe below) musty/pet

Comments:

private well - not being used

0.0

lacquer thinner

USE/STORAGE OF OIL OR HAZARDOUS MATERIALS

Oil Tank in Basement/Building? ☐ No ☐ Yes: Oil odor near tank? ☐ None ☐ Weak ☐ Strong (____ ppmv)

Gasoline Storage in Basement/Building (e.g., lawn mowers, 5 gallon containers)? ☐ No ☐ Yes

Other OHMs observed: ☐ Paints/Stains ☐ Cleaning Solvents ☐ New Building Materials ☐ Other: ____

Comments/Description: forced hot air

PID SCREENING OF CRACKS/ANNULUS SPACES

PID screening of annulus space around utilities pipes through basement wall/floor? ☑ Yes ☐ No ☐ Not Accessible

PID screening of cracks in wall/floor and/or wall/floor interfaces? ☑ Yes ☐ No ☐ Not Accessible ☐ No Cracks

PID screening of space above drain sump? ☐ Not Applicable ☐ Not Accessible ☑ Yes ☐ No

Results of Screening/Comments:

0.0.

SAMPLE/COLLECTION INFORMATION

Sample ID:	Location	Time	Date	PID PPMV
9-B	basement	12:15	2/9/05	0.0
9-1	Kitchen	12.00	2/9/05	0.0/0.1

SAMPLING PROCEDURE: ☐ *(1) Run PID pump for at least 60 seconds to purge. (2) With tube on outlet, direct discharge into an inverted 40 mL vial. (3) Sample for 30-60 seconds. (4) Slowly withdraw tube from vial while PID pump running. (4) __Tightly__ cap vial, label, and store in dark (DO NOT COOL/REFRIGERATE).* ☐ Other procedure used (describe on back of form)

Samples Collected By: Irene Dak

Comments on Back: ☐ No ☐ Yes

BWSC/NERO Lab/IAQ/99-4 4/99

MASSACHUSETTS ARTMENT OF ENVIRONMENTAL PROTECTIC

Northeast Regional Office/Bureau of Waste Site Cleanup

INDOOR AIR SCREENING/SAMPLING FORM

RELEASE TRACKING NUMBER 3- 24376

TOWN Somerville

Address: 11-13 Tufts St.

Name/Identifier: Dolores Devellis

BUILDING INFORMATION (check all that apply)

Type of Building: ☑ Residential ☐ Commercial ☐ Industrial ☐ Mixed ☐ Other: 3

Foundation Type: ☐ Finished Basement ☑ Full Basement ☐ Partial Basement/Crawl Space ☐ Slab-on-Grade

Foundation Material(s): ☑ Fieldstone ☐ Concrete Block ☐ Poured Concrete ☐ Other:

Foundation Integrity: ☐ No Cracks/Open Joints ☐ Moderate Cracks/Open Joints ☐ Many Cracks/Open Joints

Basement/Slab Floor: ☐ Concrete/Good Integrity ☑ Concrete with Cracks ☐ Earthen Floor ☐ Carpet/Flooring

Basement Use: ☑ Storage/Infrequent Use ☐ Recreation/Living Space ☐ Bedrooms ☐ Other:

Drainage Sump Present: ☐ No ☐ Yes Standing Water in Sump? ☐ No ☐ Yes Product in Sump? ☐ No ☐ Yes

Ducted Heating/Cooling (HVAC) System? ☐ No ☑ Yes HVAC Air Intake in Basement? ☐ No ☐ Yes

Open windows in sampling area(s)? ☑ No ☐ Yes Odors in basement/building? ☐ No ☐ Yes (describe below)

Comments:

USE/STORAGE OF OIL OR HAZARDOUS MATERIALS

Oil Tank in Basement/Building? ☐ No ☑ Yes: 3 Oil odor near tank? ☐ None ☑ Weak ☐ Strong (_____ ppmv)

Gasoline Storage in Basement/Building (e.g., lawn mowers, 5 gallon containers)? ☐ No ☐ Yes

Other OHMs observed: ☐ Paints/Stains ☐ Cleaning Solvents ☐ New Building Materials ☐ Other:

Comments/Description: forced hot water

PID SCREENING OF CRACKS/ANNULUS SPACES

PID screening of annulus space around utilities pipes through basement wall/floor? ☑ Yes ☐ No ☐ Not Accessible

PID screening of cracks in wall/floor and/or wall/floor interfaces? ☑ Yes ☐ No ☐ Not Accessible ☐ No Cracks

PID screening of space above drain sump? ☑ Not Applicable ☐ Not Accessible ☐ Yes ☐ No

Results of Screening/Comments:

SAMPLE/COLLECTION INFORMATION

Sample ID:	Location	Time	Date	PID PPMV
11-1	kitchen	1:08	2/9/05	0/0.1
11-B	basement	1:15	2/9/05	0/0.1

SAMPLING PROCEDURE: ☐ *(1) Run PID pump for at least 60 seconds to purge. (2) With tube on outlet, direct discharge into an inverted 40 mL vial. (3) Sample for 30-60 seconds. (4) Slowly withdraw tube from vial while PID pump running. (4) __Tightly__ cap vial, label, and store in dark (DO NOT COOL/REFRIGERATE).* ☐ Other procedure used (describe on back of form)

Samples Collected By: Diane Dale

Comments on Back: ☐ No ☐ Yes

MASSACHUSETTS ARTMENT OF ENVIRONMENTAL PROTECTIO

Northeast Regional Office/Bureau of Waste Site Cleanup

INDOOR AIR SCREENING/SAMPLING FORM

RELEASE TRACKING NUMBER 3- 24376

TOWN Somerville

Address: 19 Tufts St.

Name/Identifier: Gerald Laurentano

BUILDING INFORMATION (check all that apply)

Type of Building: ☑ Residential ☐ Commercial ☐ Industrial ☐ Mixed ☐ Other: ____

Foundation Type: ☐ Finished Basement ☑ Full Basement ☐ Partial Basement/Crawl Space ☐ Slab-on-Grade

Foundation Material(s): ☑ Fieldstone ☐ Concrete Block ☐ Poured Concrete ☐ Other: brick

Foundation Integrity: ☐ No Cracks/Open Joints ☐ Moderate Cracks/Open Joints ☐ Many Cracks/Open Joints

Basement/Slab Floor: ☐ Concrete/Good Integrity ☑ Concrete with Cracks ☐ Earthen Floor ☐ Carpet/Flooring

Basement Use: ☑ Storage/Infrequent Use ☐ Recreation/Living Space ☐ Bedrooms ☐ Other: ____

Drainage Sump Present: ☐ No ☐ Yes Standing Water in Sump? ☐ No ☐ Yes Product in Sump? ☑ No ☐ Yes

Ducted Heating/Cooling (HVAC) System? ☑ No ☐ Yes HVAC Air Intake in Basement? ☐ No ☐ Yes

Open windows in sampling area(s)? ☑ No ☐ Yes Odors in basement/building? ☐ No ☐ Yes (describe below)

Comments: near cleanout -0.5 PID
[illegible]

USE/STORAGE OF OIL OR HAZARDOUS MATERIALS

Oil Tank in Basement/Building? ☐ No ☐ Yes: Oil odor near tank? ☐ None ☐ Weak ☐ Strong (____ ppmv)

Gasoline Storage in Basement/Building (e.g., lawn mowers, 5 gallon containers)? ☐ No ☐ Yes

Other OHMs observed: ☑ Paints/Stains ☐ Cleaning Solvents ☐ New Building Materials ☐ Other: ____

Comments/Description: paints - latex
mineral spirits

PID SCREENING OF CRACKS/ANNULUS SPACES

PID screening of annulus space around utilities pipes through basement wall/floor? ☐ Yes ☐ No ☐ Not Accessible

PID screening of cracks in wall/floor and/or wall/floor interfaces? ☐ Yes ☐ No ☐ Not Accessible ☐ No Cracks

PID screening of space above drain sump? ☐ Not Applicable ☐ Not Accessible ☐ Yes ☐ No

Results of Screening/Comments: cleanout - 0.5 PID
gets water if bad
near main line 03 PID

SAMPLE/COLLECTION INFORMATION

Sample ID:	Location	Time	Date	PID PPMV
19-B	19 Tufts - Basement	12:40	2/9/05	0.5 max
19-1	19 Tufts St - 1st/Floor	12:30	2/9/05	0.2-0.3

SAMPLING PROCEDURE: ☐ *(1) Run PID pump for at least 60 seconds to purge. (2) With tube on outlet, direct discharge into an inverted 40 mL vial. (3) Sample for 30-60 seconds. (4) Slowly withdraw tube from vial while PID pump running. (4) Tightly cap vial, label, and store in dark (DO NOT COOL/REFRIGERATE).* ☐ Other procedure used (describe on back of form)

Samples Collected By: Irene Dale

Comments on Back: ☐ No ☐ Yes

RELEASE TRACKING NUMBER 3- 24376

TOWN Somerville

MASSACHUSETTS ARTMENT OF ENVIRONMENTAL PROTECTIC

Northeast Regional Office/Bureau of Waste Site Cleanup

INDOOR AIR SCREENING/SAMPLING FORM

Address: 25 Tufts St.

Name/Identifier: Lee Boveri

BUILDING INFORMATION (check all that apply)

Type of Building: ☑ Residential ☐ Commercial ☐ Industrial ☐ Mixed ☐ Other: ____

Foundation Type: ☐ Finished Basement ☑ Full Basement ☐ Partial Basement/Crawl Space ☐ Slab-on-Grade

Foundation Material(s): ☑ Fieldstone ☐ Concrete Block ☐ Poured Concrete ☐ Other: ____

Foundation Integrity: ☐ No Cracks/Open Joints ☑ Moderate Cracks/Open Joints ☐ Many Cracks/Open Joints

Basement/Slab Floor: ☐ Concrete/Good Integrity ☑ Concrete with Cracks ☐ Earthen Floor ☐ Carpet/Flooring

Basement Use: ☑ Storage/Infrequent Use ☐ Recreation/Living Space ☐ Bedrooms ☐ Other: ____

Drainage Sump /cleanout Present: ☐ No ☐ Yes Standing Water in Sump? ☑ No ☐ Yes Product in Sump? ☑ No ☐ Yes

Ducted Heating/Cooling (HVAC) System? ☐ No ☑ Yes HVAC Air Intake in Basement? ☐ No ☐ Yes

Open windows in sampling area(s)? ☐ No ☐ Yes Odors in basement/building? ☑ No ☐ Yes (describe below)

Comments: 1st/ fl - smoke open door
boiler-forced hot water serviced December

USE/STORAGE OF OIL OR HAZARDOUS MATERIALS

Oil Tank in Basement/Building? ☐ No ☑ Yes: Oil odor near tank? ☐ None ☐ Weak ☐ Strong (_____ ppmv)

Gasoline Storage in Basement/Building (e.g., lawn mowers, 5 gallon containers)? ☐ No ☐ Yes

Other OHMs observed: ☐ Paints/Stains ☐ Cleaning Solvents ☐ New Building Materials ☐ Other: ____

Comments/Description: 2 holes - potential sumps 2 systems - 1 oil, 1 gas
staining on floor

PID SCREENING OF CRACKS/ANNULUS SPACES

PID screening of annulus space around utilities pipes through basement wall/floor? ☐ Yes ☐ No ☐ Not Accessible

PID screening of cracks in wall/floor and/or wall/floor interfaces? ☑ Yes ☐ No ☐ Not Accessible ☐ No Cracks

PID screening of space above drain sump? ☐ Not Applicable ☐ Not Accessible ☑ Yes ☐ No

Results of Screening/Comments:

0

SAMPLE COLLECTION INFORMATION

Sample ID:	Location	Time	Date	PID PPMV
25-B	Basement	9:30	2/9/05	0
25-1	1st floor	9:45	2/9/05	0

SAMPLING PROCEDURE: ☐ *(1) Run PID pump for at least 60 seconds to purge. (2) With tube on outlet, direct discharge into an inverted 40 mL vial. (3) Sample for 30-60 seconds. (4) Slowly withdraw tube from vial while PID pump running. (4) __Tightly__ cap vial, label, and store in dark (DO NOT COOL/REFRIGERATE).* ☐ Other procedure used (describe on back of form)

Samples Collected By: Irene Dale

Comments on Back: ☐ No ☐ Yes

MASSACHUSETTS I RTMENT OF ENVIRONMENTAL PROTECTIOI

Northeast Regional Office/Bureau of Waste Site Cleanup

INDOOR AIR SCREENING/SAMPLING FORM

RELEASE TRACKING NUMBER 3- 24376

TOWN Somerville

Address: 27 Tufts St.

Name/Identifier: Richard Papa

BUILDING INFORMATION (check all that apply)

Type of Building: ☑ Residential ☐ Commercial ☐ Industrial ☐ Mixed ☐ Other: ____

Foundation Type: ☐ Finished Basement ☑ Full Basement ☐ Partial Basement/Crawl Space ☐ Slab-on-Grade

Foundation Material(s): ☑ Fieldstone ☐ Concrete Block ☐ Poured Concrete ☐ Other: ____

Foundation Integrity: ☐ No Cracks/Open Joints ☑ Moderate Cracks/Open Joints ☐ Many Cracks/Open Joints

Basement/Slab Floor: ☐ Concrete/Good Integrity ☑ Concrete with Cracks ☐ Earthen Floor ☐ Carpet/Flooring

Basement Use: ☑ Storage/Infrequent Use ☐ Recreation/Living Space ☐ Bedrooms ☐ Other: ____

Drainage Sump Present: ☐ No ☑ Yes Standing Water in Sump? can't tell ☐ No ☐ Yes Product in Sump? ☐ No ☐ Yes

Ducted Heating/Cooling (HVAC) System? ☐ No ☐ Yes HVAC Air Intake in Basement? ☐ No ☐ Yes

Open windows in sampling area(s)? ☑ No ☐ Yes Odors in basement/building? ☐ No ☑ Yes (describe below)

Comments: PID - 1.1 - 1.2 Avg. 1.2 basement wall outside starter fluid paints/solvents oil/ gasoline

USE/STORAGE OF OIL OR HAZARDOUS MATERIALS

Oil Tank in Basement/Building? ☐ No ☑ Yes: Oil odor near tank? ☐ None ☐ Weak ☐ Strong (____ ppmv)

Gasoline Storage in Basement/Building (e.g., lawn mowers, 5 gallon containers)? ☐ No ☑ Yes starter fluid

Other OHMs observed: ☑ Paints/Stains ☐ Cleaning Solvents ☐ New Building Materials ☐ Other: ____

Comments/Description: small oil spill in basement B - oil/0.2

PID SCREENING OF CRACKS/ANNULUS SPACES

PID screening of annulus space around utilities pipes through basement wall/floor? ☑ Yes ☐ No ☐ Not Accessible

PID screening of cracks in wall/floor and/or wall/floor interfaces? ☑ Yes ☐ No ☐ Not Accessible ☐ No Cracks

PID screening of space above drain sump? ☑ Not Applicable ☐ Not Accessible ☐ Yes ☐ No

Results of Screening/Comments:

SAMPLE COLLECTION INFORMATION

Sample ID:	Location	Time	Date	PID PPMV
27-B	basement	10:50	2/9/05	0.1-0.2
27-1	1st/floor	10:40	2/8/05	1.2

SAMPLING PROCEDURE: ☐ *(1) Run PID pump for at least 60 seconds to purge. (2) With tube on outlet, direct discharge into an inverted 40 mL vial. (3) Sample for 30-60 seconds. (4) Slowly withdraw tube from vial while PID pump running. (4) __Tightly__ cap vial, label, and store in dark (DO NOT COOL/REFRIGERATE).* ☐ Other procedure used (describe on back of form)

Samples Collected By: Irene Dale

Comments on Back: ☑ No ☐ Yes

from sewer -8
depth -6-7, ft above water table

DEP
BWSC/NERO

Massachusetts Department of Environmental Protection
Northeast Regional Office/Bureau of Waste Site Cleanup

Analytical Screening Data Report
AIR SAMPLES

Release Tracking Number:
3-24376
Town:
SOMERVILLE

Name of Site	Address	Sample Collected By
COMMERCIAL	50 TUFTS STREET	MACAFEE/DALE

Sample Location	Field ID	Lab ID	Date Sampled	Date Analyzed
EQUIPMENT BLANK	EQUIP. BLANK	P3425 / E3425	2/9/05	2/0/05
9 TUFTS STREET	9-1 KITCHEN AIR	P3426 / E3426	2/9/05	2/10/05
9 TUFTS STREET	9-B BASEMENT	P3427 / E3427	2/9/05	2/10/05
25 TUFTS STREET	25-1 1ST FLOOR AIR	P3428 / E3428	2/9/05	2/10/05

SAMPLE RESULTS
Ambient Air Concentration

			Sample Identifier			
			EQUIP. BLANK	9-1 KITCHEN AIR	9-B BASEMENT	25-1 1ST FLOOR AIR
ANALYTE	Detector	Est RL ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv
methyl(t)butylether	PID	0.087	ND	ND	ND	ND
benzene	PID	0.072	ND	ND	ND	ND
toluene	PID	0.026	ND	ND	ND	ND
ethylbenzene	PID	0.042	ND	ND	ND	ND
total xylenes	PID	0.093	ND	ND	ND	ND
(1,2,4)-trimethylbenzene	PID	0.031	ND	ND	ND	ND
naphthalene	PID	0.13	ND	ND	ND	ND
T. unk. non-chloro (as xylene)	PID	0.093	ND	ND	ND	ND
methylene chloride	ELCD	0.075	ND	ND	ND	ND
(1,1)-dichloroethane	ELCD	0.058	ND	ND	ND	ND
cis(1,2)-dichloroethene	ELCD	0.080	ND	ND	ND	ND
(1,1,1)-trichloroethane	ELCD	0.070	ND	ND	ND	ND
(1,2)-dichloroethane	ELCD	0.077	ND	ND	ND	ND
trichloroethene	ELCD	0.071	ND	ND	ND	ND
tetrachloroethene	ELCD	0.038	ND	ND	ND	ND
chlorobenzene	ELCD	0.11	ND	ND	ND	ND
unk. chloro VOC	ELCD	0.071	ND	ND	ND	ND
unk chloro VOC	ELCD	0.071	ND	ND	ND	ND
unk. chloro VOC	ELCD	0.071	ND	ND	ND	ND

COMMENTS:
1. ND means target compound not detected. 2. (TR) means a target compound was found at a trace level - less than it's reportable level "RL", but above it's method detection limit (MDL).

Sampling Method: NERO Lab ✓	Instrumentation: SRI	Analytical Method: NERO
Daily Quality Control Standards: -Air Blanks -QC Calibration Check Standard (gaseous)		
Chromatograms Attached? Yes	Sample(s) Analyzed By: 2/11/05	

BWSC/NERO Lab/water/01

Component RLs updated on: 4/04

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #1

Prepared by Larry Immerman, EAIII   Component RLs updated on: 4/04

Site:	COMMERCIAL	Address:	50 TUFTS STREET			Town:	SOMERVILLE
Sample Location:	EQUIPMENT BLANK	Date Sampled:	2/9/05		RTN:	3-24376	
Date Analyzed:	2/0/05	Lab ID:	P3425 / E3425	Field I.D.:	EQUIP. BLANK	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.008	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.13		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #2

Prepared by Larry Immerman, EAIII   Component RLs updated on: 4/04

Site:	COMMERCIAL [illegible]	Address:	50 TUFTS STREET			Town:	SOMERVILLE
Sample Location:	TUFTS STREET	Date Sampled:	2/9/05		RTN:	3-24376	
Date Analyzed:	2/10/05	Lab ID:	P3426 / E3426	Field I.D.:	9-1 KITCHEN AIR	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.008	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.129		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #4

Prepared by Larry Immerman, EAIII   Component RLs updated on: 4/04

Site:	COMMERCIAL		Address:	50 TUFTS STREET		Town:	SOMERVILLE
Sample Location:	25 TUFTS STREET		Date Sampled:	2/9/05	RTN:	3-24376	
Date Analyzed:	2/10/05	Lab ID:	P3428 / E3428	Field I.D.:	25-1 1ST FLOOR AI	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.0084	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.13		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

DEP
BWSC/NERO

Massachusetts Department of Environmental Protection
Northeast Regional Office/Bureau of Waste Site Cleanup

Analytical Screening Data Report
AIR SAMPLES

Release Tracking Number:
3-24376
Town:
SOMERVILLE

Name of Site	Address	Sample Collected By
COMMERCIAL	50 TUFTS STREET	MACAFEE/DALE

Sample Location	Field ID	Lab ID	Date Sampled	Date Analyzed
19 TUFTS STREET	19-B BASEMENT AIR	P3433 / E3433	2/9/05	2/0/05
11/13 TUFTS STREET	11-1 KITCHEN AIR	P3434 / E3434	2/9/05	2/10/05
11/13 TUFTS STREET	11-B BASEMENT AIR	P3435 / E3435	2/9/05	2/10/05

SAMPLE RESULTS
Ambient Air Concentration

			Sample Identifier			
			19-B BASEMENT AIR	11-1 KITCHEN AIR	11-B BASEMENT AIR	
ANALYTE	Detector	Est RL ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv
methyl(t)butylether	PID	0.087	ND	ND	ND	
benzene	PID	0.072	ND	ND	ND	
toluene	PID	0.026	ND	ND	ND	
ethylbenzene	PID	0.042	ND	ND	ND	
total xylenes	PID	0.093	ND	ND	ND	
(1,2,4)-trimethylbenzene	PID	0.031	ND	ND	ND	
naphthalene	PID	0.13	ND	ND	ND	
T. unk. non-chloro (as xylene)	PID	0.093	ND	ND	ND	
methylene chloride	ELCD	0.075	ND	ND	ND	
(1,1)-dichloroethane	ELCD	0.058	ND	ND	ND	
cis(1,2)-dichloroethene	ELCD	0.080	ND	ND	ND	
(1,1,1)-trichloroethane	ELCD	0.070	ND	ND	ND	
(1,2)-dichloroethane	ELCD	0.077	ND	ND	ND	
trichloroethene	ELCD	0.071	ND	ND	ND	
tetrachloroethene	ELCD	0.038	0.26	ND	ND	
chlorobenzene	ELCD	0.11	ND	ND	ND	
unk. chloro VOC	ELCD	0.071	ND	ND	ND	
unk chloro VOC	ELCD	0.071	ND	ND	ND	
unk. chloro VOC	ELCD	0.071	ND	ND	ND	

COMMENTS
1. ND means target compound not detected. 2. (TR) means a target compound was found at a trace level - less than it's reportable level "RL", but above it's method detection limit (MDL).

Sampling Method: NERO Lab	Instrumentation: SRI	Analytical Method: NERO
Daily Quality Control Standards✓ -Air Blanks -QC Calibration Check Standard (gaseous)		
Chromatograms Attached? ✓Yes	Sample(s) Analyzed By: 2/11/05	

BWSC/NERO Lab/water/01

Component RLs updated on 4/04

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #1

Prepared by Larry Immerman, EAIII Component RLs updated on: 4/04

Site:	COMMERCIAL		Address:	50 TUFTS STREET		Town:	SOMERVILLE
Sample Location:	19 TUFTS STREET		Date Sampled:	2/9/05		RTN:	3-24376
Date Analyzed:	2/0/05	Lab ID:	P3433 / E3433	Field I.D.:	19-B BASEMENT AI	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.008	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.13		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene	0.16	0.0088	0.028		0.16	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene	0.26	0.012	0.038		0.26	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #2

Prepared by Larry Immerman, EAIII   Component RLs updated on: 4/04

Site:	COMMERCIAL	Address:	50 TUFTS STREET		Town:	SOMERVILLE
Sample Location:	11/13 TUFTS STREET	Date Sampled:	2/9/05	RTN:	3-24376	
Date Analyzed:	2/10/05	Lab ID: P3434 / E3434	Field I.D.: 11-1 KITCHEN AIR	Collecter:	MACAFEE/DALE	

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.008	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.129		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #3

Prepared by Larry Immerman, EAIII   Component RLs updated on: 4/04

Site:	COMMERCIAL		Address:	50 TUFTS STREET		Town:	SOMERVILLE
Sample Location:	11/13 TUFTS STREET		Date Sampled:	2/9/05	RTN:	3-24376	
Date Analyzed:	2/10/05	Lab ID:	P3435 / E3435	Field I.D.:	11-B BASEMENT AI	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.0084	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.13		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

BWSC/NERO

Massachusetts Department of Environmental Protection
Northeast Regional Office/Bureau of Waste Site Cleanup

Analytical Screening Data Report
AIR SAMPLES

Release Tracking Number:
3-24376
Town:
SOMERVILLE

Name of Site	Address	Sample Collected By
COMMERCIAL	50 TUFTS STREET	MACAFEE/DALE

Sample Location	Field ID	Lab ID	Date Sampled	Date Analyzed
25 TUFTS STREET	25-B BASEMENT AIR	P3429 / E3429	2/9/05	2/0/05
27 TUFTS STREET	27-1 1ST FLOOR AIR	P3430 / E3430	2/9/05	2/10/05
27 TUFTS STREET	27-B BASEMENT AIR	P3431 / E3431	2/9/05	2/10/05
19 TUFTS STREET	19-1 1ST FLOOR AIR	P3432 / E3432	2/9/05	2/10/05

SAMPLE RESULTS

Ambient Air Concentration

		Sample Identifier				
			25-B BASEMENT AIR	27-1 1ST FLOOR AIR	27-B BASEMENT AIR	19-1 1ST FLOOR AIR
ANALYTE	Detector	Est RL ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv	Estimated Air Conc. ppmv
methyl(t)butylether	PID	0.087	ND	ND	ND	ND
benzene	PID	0.072	ND	ND	ND	ND
toluene	PID	0.026	ND	ND	ND	ND
ethylbenzene	PID	0.042	ND	ND	ND	ND
total xylenes	PID	0.093	ND	ND	ND	ND
(1,2,4)-trimethylbenzene	PID	0.031	ND	ND	ND	ND
naphthalene	PID	0.13	ND	ND	ND	ND
T. unk. non-chloro (as xylene)	PID	0.093	ND	ND	ND	ND
methylene chloride	ELCD	0.075	ND	ND	ND	ND
(1,1)-dichloroethane	ELCD	0.058	ND	ND	ND	ND
cis(1,2)-dichloroethene	ELCD	0.080	ND	ND	ND	ND
(1,1,1)-trichloroethane	ELCD	0.070	ND	ND	ND	ND
(1,2)-dichloroethane	ELCD	0.077	ND	ND	ND	ND
trichloroethene	ELCD	0.071	ND	ND	ND	ND
tetrachloroethene	ELCD	0.038	ND	ND	ND	ND
chlorobenzene	ELCD	0.11	ND	ND	ND	ND
unk. chloro VOC	ELCD	0.071	ND	ND	ND	ND
unk chloro VOC	ELCD	0.071	ND	ND	ND	ND
unk. chloro VOC	ELCD	0.071	ND	ND	ND	ND

COMMENTS

1. ND means target compound not detected. 2. (TR) means a target compound was found at a trace level - less than it's reportable level "RL", but above it's method detection limit (MDL).

Sampling Method: NERO Lab	Instrumentation: SRI	Analytical Method: NERO
Daily Quality Control Standards: ✓ -Air Blanks -QC Calibration Check Standard (gaseous)		
Chromatograms Attached? ✓Yes	Sample(s) Analyzed By: 2/11/05	

BWSC/NERO Lab/water/01

Component RLs updated on: 4/04

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

Prepared by Larry Immerman, EAIII   Component RLs updated on: 4/04

SAMPLE #1

Site:	COMMERCIAL	Address:	50 TUFTS STREET			Town:	SOMERVILLE
Sample Location:	25 TUFTS STREET	Date Sampled:	2/9/05	RTN:	3-24376		
Date Analyzed:	2/0/05	Lab ID:	P3429 / E3429	Field I.D.:	25-B BASEMENT AI	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.008	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.13		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #2

Prepared by Larry Immerman, EAIII Component RLs updated on: 4/04

Site:	COMMERCIAL		Address:	50 TUFTS STREET		Town:	SOMERVILLE
Sample Location:	27 TUFTS STREET		Date Sampled:	2/9/05	RTN:	3-24376	
Date Analyzed:	2/10/05	Lab ID:	P3430 / E3430	Field I.D.:	27-1 1ST FLOOR AI	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.008	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.129		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #3

Prepared by Larry Immerman, EAIII Component RLs updated on: 4/04

Site:	COMMERCIAL		Address:	50 TUFTS STREET		Town:	SOMERVILLE
Sample Location:	27 TUFTS STREET		Date Sampled:	2/9/05	RTN:	3-24376	
Date Analyzed:	2/10/05	Lab ID:	P3431 / E3431	Field I.D.:	27-B BASEMENT AI	Collecter:	MACAFEE/DALE

Ambient Air Concentration

Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.0084	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.13		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	

AIR SPREADSHEET - SRI 8610B w\ (PID\dry-ELCD)

SAMPLE #4

Prepared by Larry Immerman, EAIII   Component RLs updated on: 4/04

Site:	COMMERCIAL	Address:	50 TUFTS STREET			Town:	SOMERVILLE
Sample Location:	19 TUFTS STREET	Date Sampled:	2/9/05		RTN:	3-24376	
Date Analyzed:	2/10/05	Lab ID:	P3432 / E3432	Field I.D.:	19-1 1ST FLOOR AIR	Collecter:	MACAFEE/DALE

Ambient Air Concentration

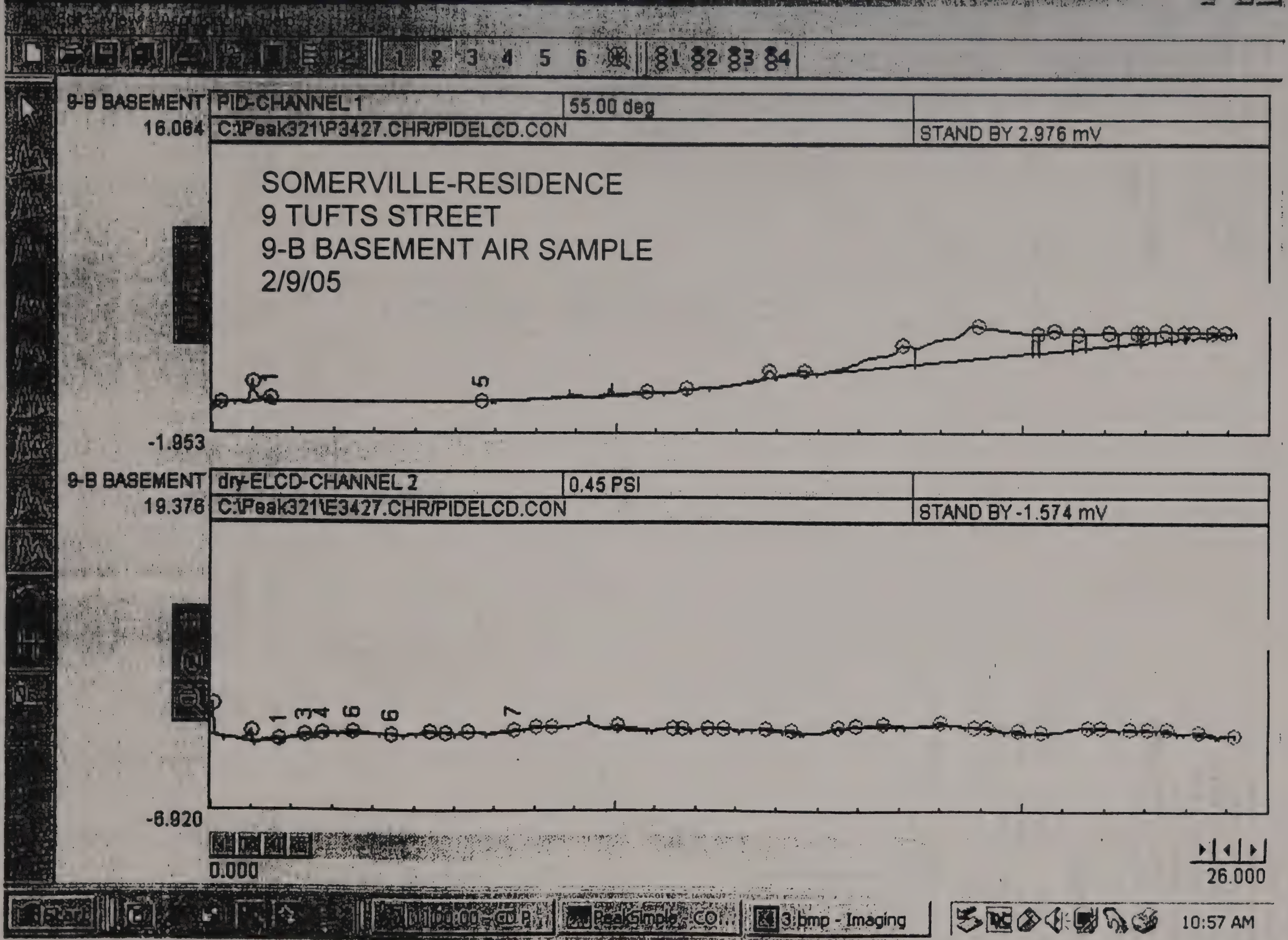
Where:
Ca(ppmv) = GC concentration in parts per million volumetric (ppmv) units

CHANNEL 1 (PID)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methyl(t)butylether		0.028	0.087		ND	
benzene		0.023	0.072		ND	
toluene		0.0084	0.026		ND	
ethylbenzene		0.014	0.042		ND	
total xylenes		0.030	0.093		ND	
(1,2,4)-trimethylbenzene		0.010	0.031		ND	
naphthalene		0.041	0.13		ND	
T. unk. non-chloro (as xylene)		0.030	0.093		ND	
trichloroethene		0.015	0.048		ND	
tetrachloroethene		0.0088	0.028		ND	
chlorobenzene		0.0071	0.022		ND	
cis (1,2)-dichloroethene		0.031	0.096		ND	

CHANNEL 2 (dry-ELCD)

Compound	Ca (ppmv)	MDL (ppmv)	RL (ppmv)		Ca (ppmv)	
methylene chloride		0.024	0.075		ND	
(1,1)-dichloroethane		0.019	0.058		ND	
cis (1,2)-dichloroethene		0.025	0.080		ND	
(1,1,1)-trichloroethane		0.022	0.070		ND	
(1,2)-dichloroethane		0.025	0.077		ND	
trichloroethene (TCE)		0.023	0.071		ND	
tetrachloroethene		0.012	0.038		ND	
chlorobenzene		0.035	0.11		ND	
unk. chloro VOC(as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	
unk. chloro VOC (as TCE)		0.023	0.071		ND	



SOMERVILLE-RESIDENCE
9 TUFTS STREET
9-B BASEMENT AIR SAMPLE
2/9/05

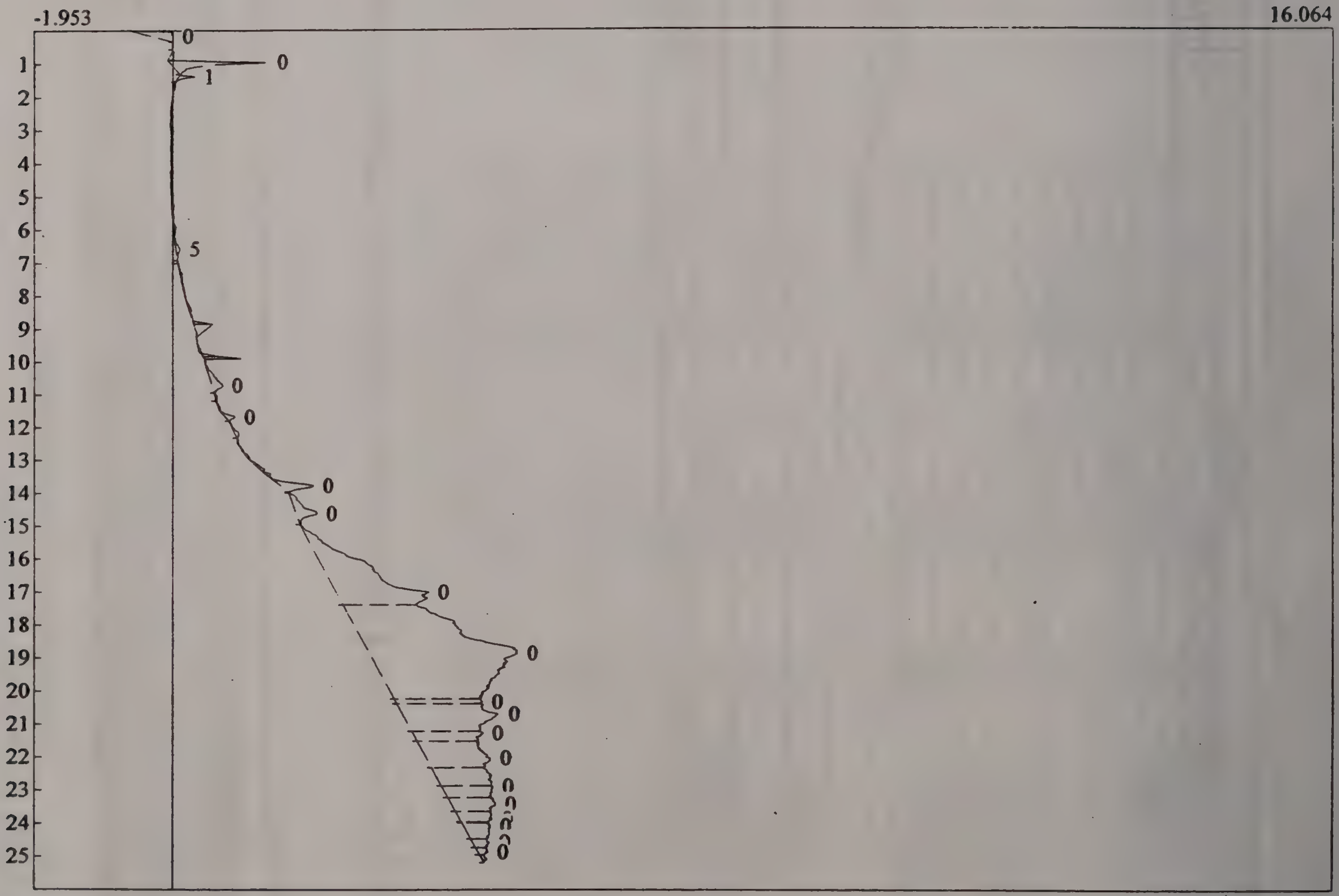
9-B BASEMENT | PID-CHANNEL 1 | 55.00 deg
16.064 | C:\Peak321\P3427.CHR/PIDELCD.CON | STAND BY 2.976 mV

9-B BASEMENT | dry-ELCD-CHANNEL 2 | 0.45 PSI
19.376 | C:\Peak321\E3427.CHR/PIDELCD.CON | STAND BY -1.574 mV

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3427.CHR ()
Sample: 9-B BASEMENT
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

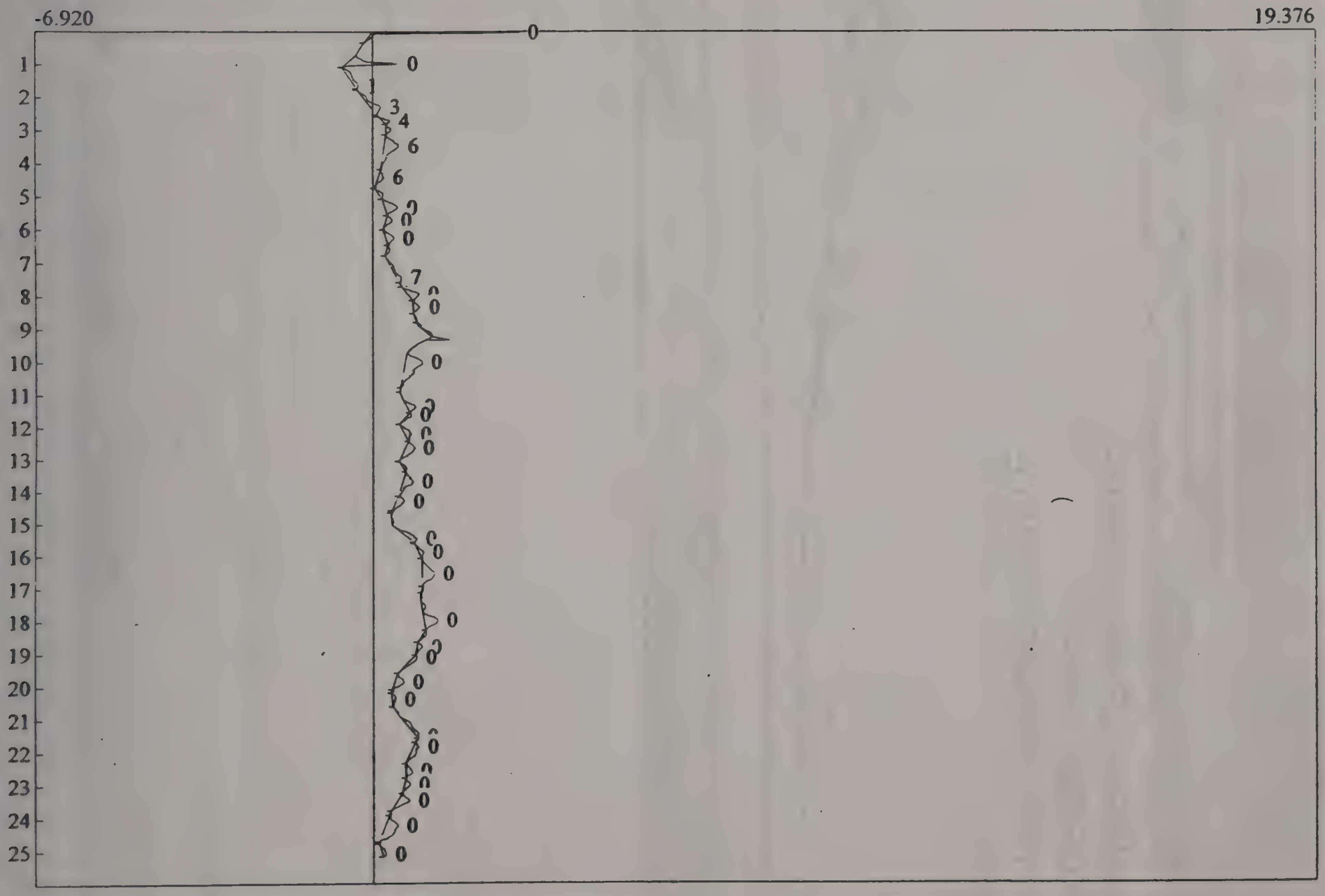


NumbeiRetention		Component	Area	External	Units
1	1.383	MTBE	1.0480	0.0233	ppmv
5	6.583	toluene	1.0000	0.0142	ppmv
2			2.0480	0.0375	

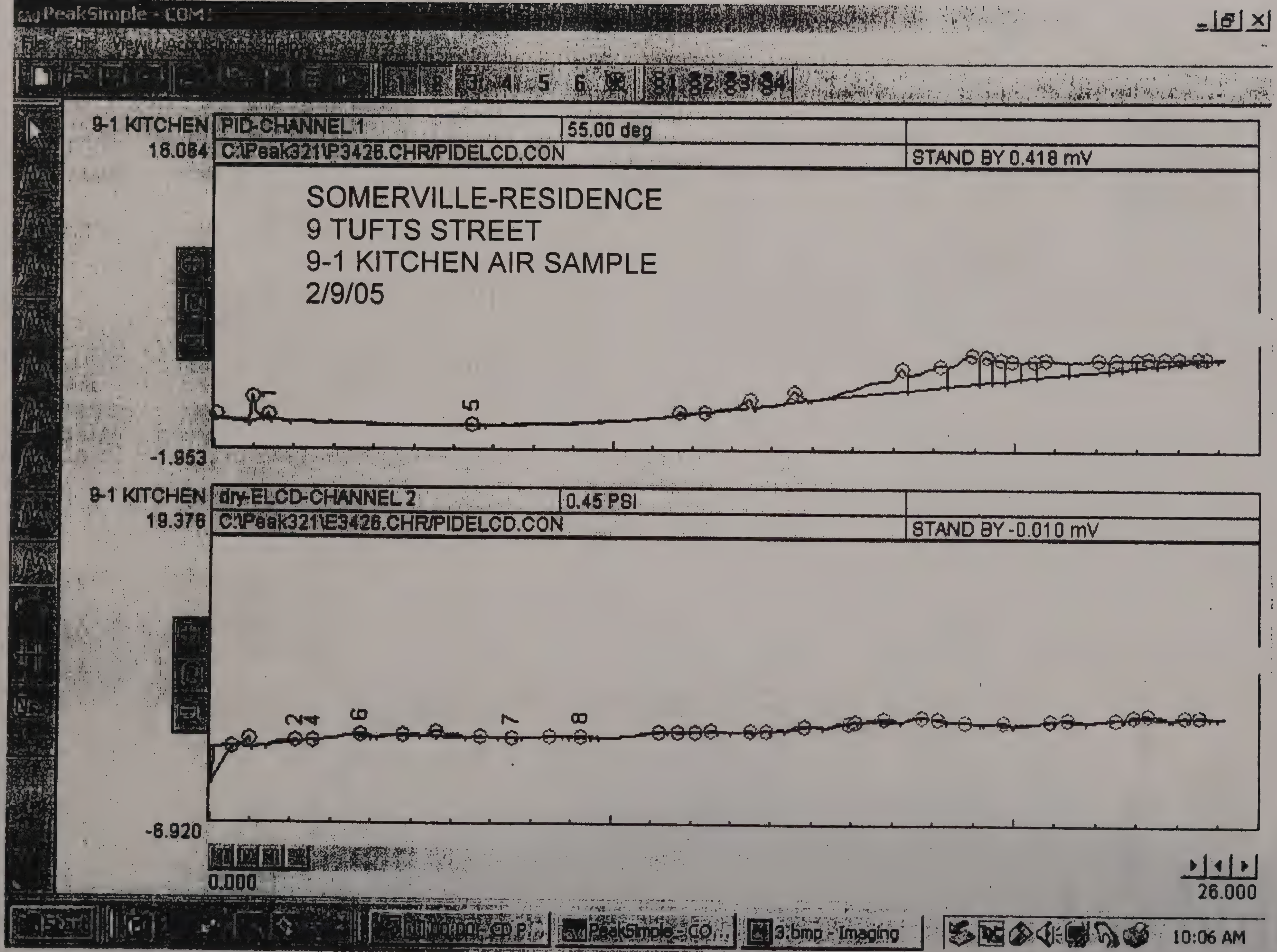
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3427.CHR ()
Sample: 9-B BASEMENT
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



Number	Retention	Component	Area	External	Units
1	1.633	MECL2	2.7830	0.2800	ppmv
3	2.266	cis(1_2)-DCE	3.9320	0.2500	ppmv
4	2.700	(1_1_1)-TCA	1.0400	0.1800	ppmv
6	3.450	TCE	7.3970	0.2420	ppmv
6	4.400	TCE	1.8360	0.1800	ppmv
7	7.433	PCE	2.1190	0.1400	ppmv
6			19.1070	1.2720	



PeakSimple - COM

9-1 KITCHEN | PID-CHANNEL 1 | 55.00 deg
16.064 | C:\Peak321\P3426.CHR/PIDELCD.CON | STAND BY 0.418 mV

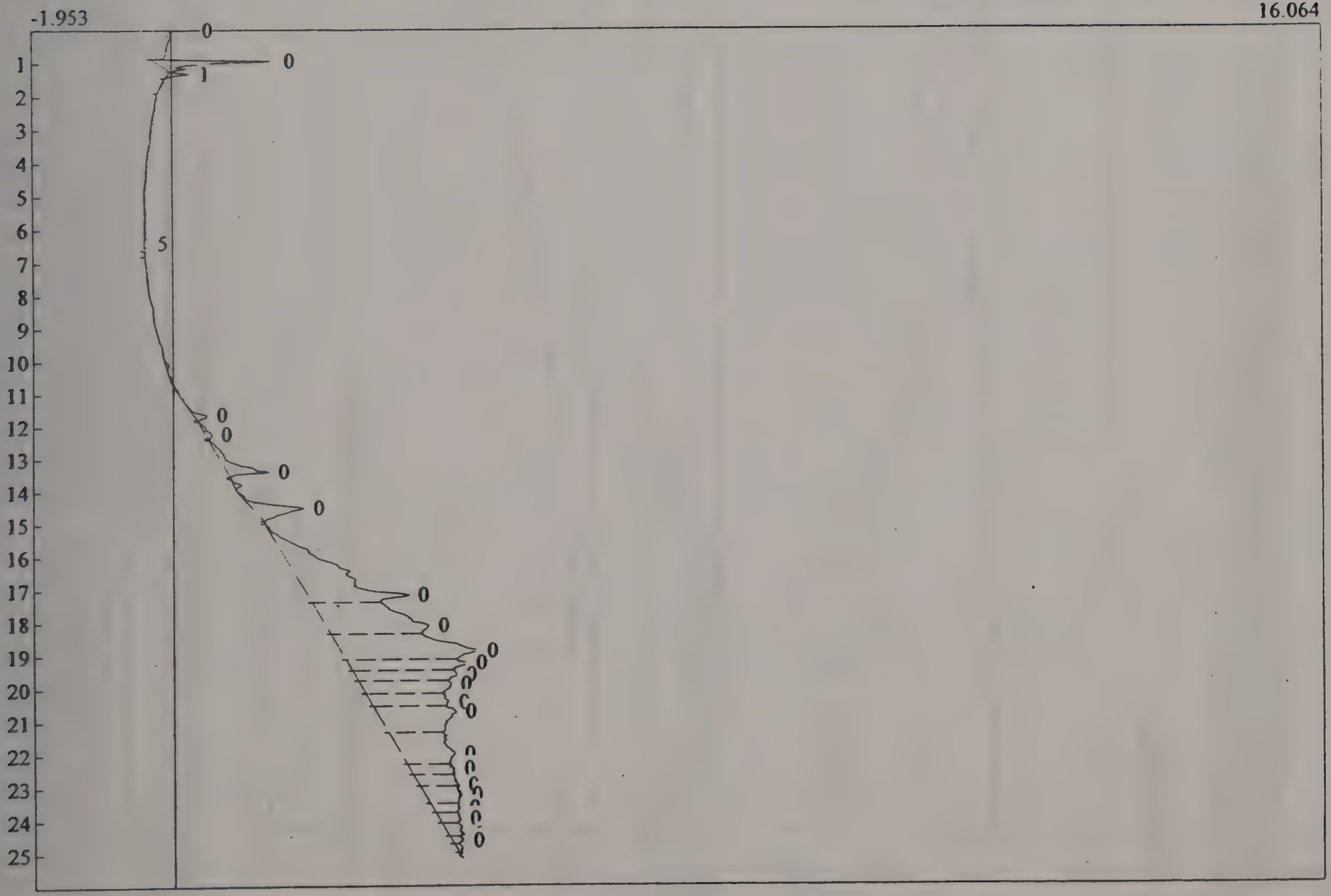
SOMERVILLE-RESIDENCE
9 TUFTS STREET
9-1 KITCHEN AIR SAMPLE
2/9/05

9-1 KITCHEN | dry-ELCD-CHANNEL 2 | 0.45 PSI
19.376 | C:\Peak321\E3426.CHR/PIDELCD.CON | STAND BY -0.010 mV

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3426.CHR ()
Sample: 9-1 KITCHEN
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

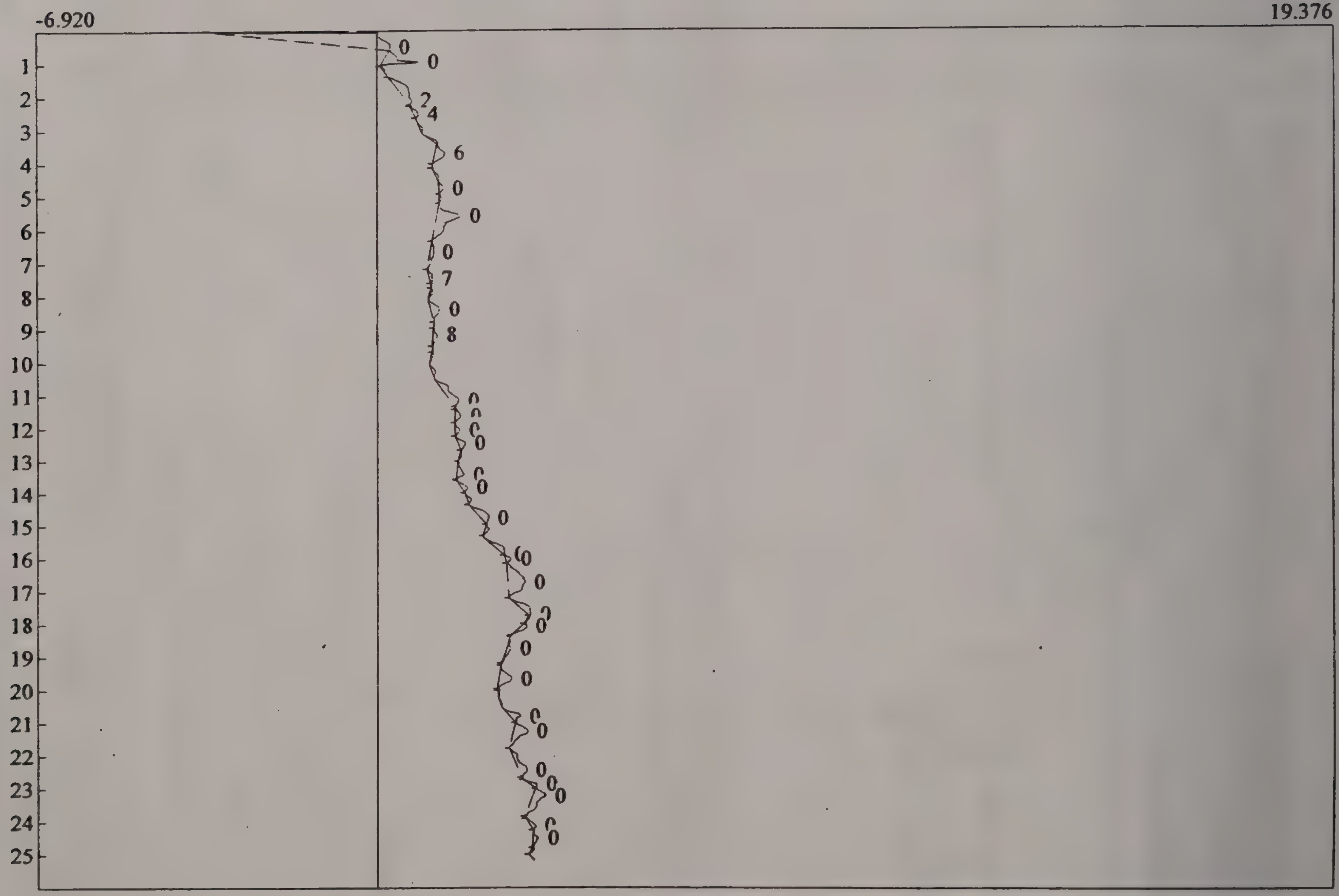


Number	Retention	Component	Area	External	Units
1	1.316	MTBE	1.4760	0.0328	ppmv
5	6.400	toluene	1.0080	0.0143	ppmv
2			2.4840	0.0471	

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3426.CHR ()
Sample: 9-1 KITCHEN
Operator: 1

Pressure program:

Init temp   Hold   Ramp   Final temp



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NumberRetention    Component        Area     External   Units

   2     2.083 (1_1)-DCA          7.4430    0.2400 ppmv
   4     2.500 (1_1_1)-TCA        1.3510    0.1800 ppmv
   6     3.666 TCE                4.1740    0.1800 ppmv
   7     7.466 PCE                1.1320    0.1400 ppmv
   8     9.166 chlorobenzene      1.5790    0.2136 ppmv

   5                             15.6790    0.9536
```
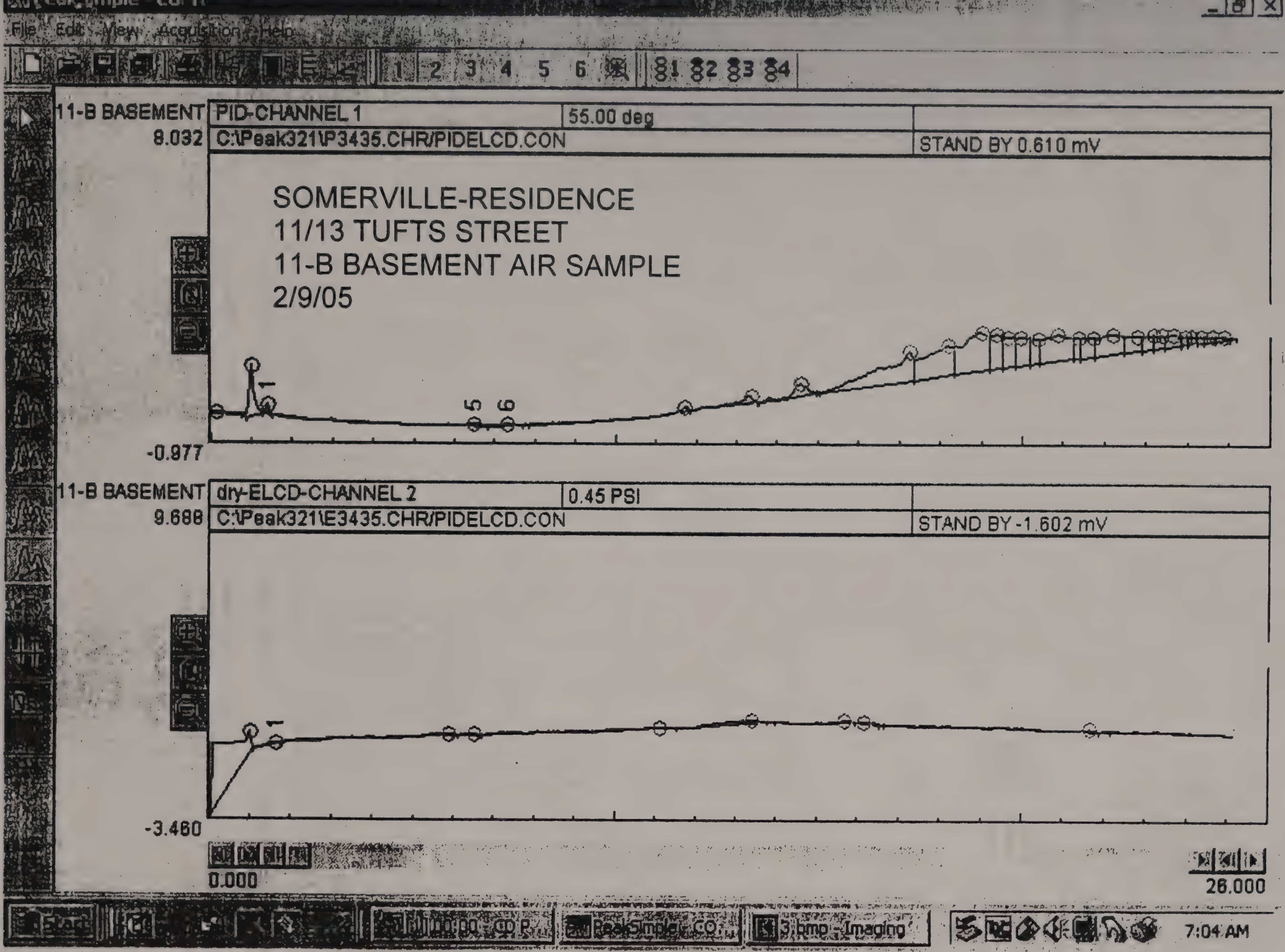



11-B BASEMENT PID-CHANNEL 1 55.00 deg
C:\Peak321\P3435.CHR/PIDELCD.CON STAND BY 0.610 mV

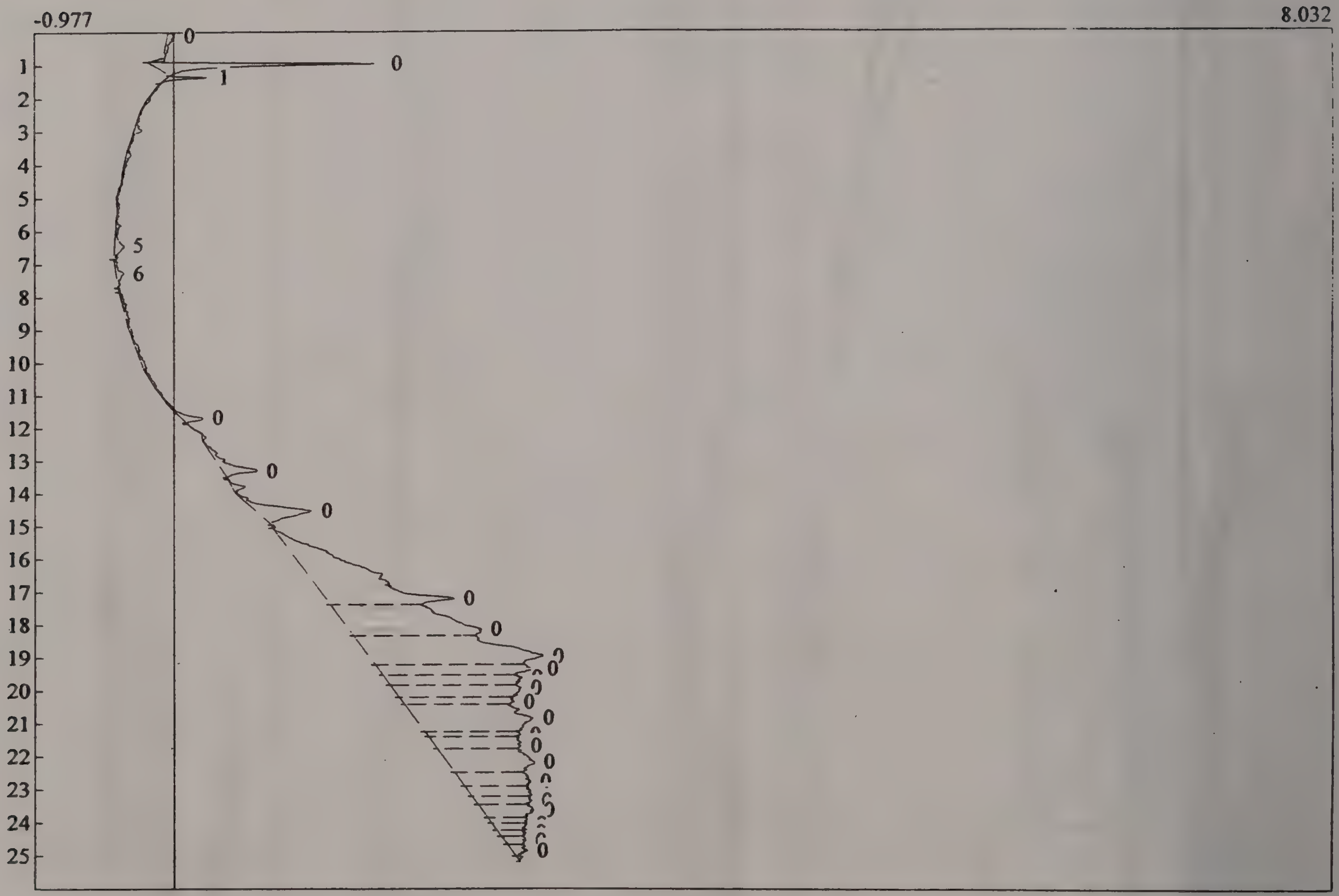
SOMERVILLE-RESIDENCE
11/13 TUFTS STREET
11-B BASEMENT AIR SAMPLE
2/9/05

11-B BASEMENT dry-ELCD-CHANNEL 2 0.45 PSI
C:\Peak321\E3435.CHR/PIDELCD.CON STAND BY -1.602 mV

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3435.CHR ()
Sample: 11-B BASEMENT
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

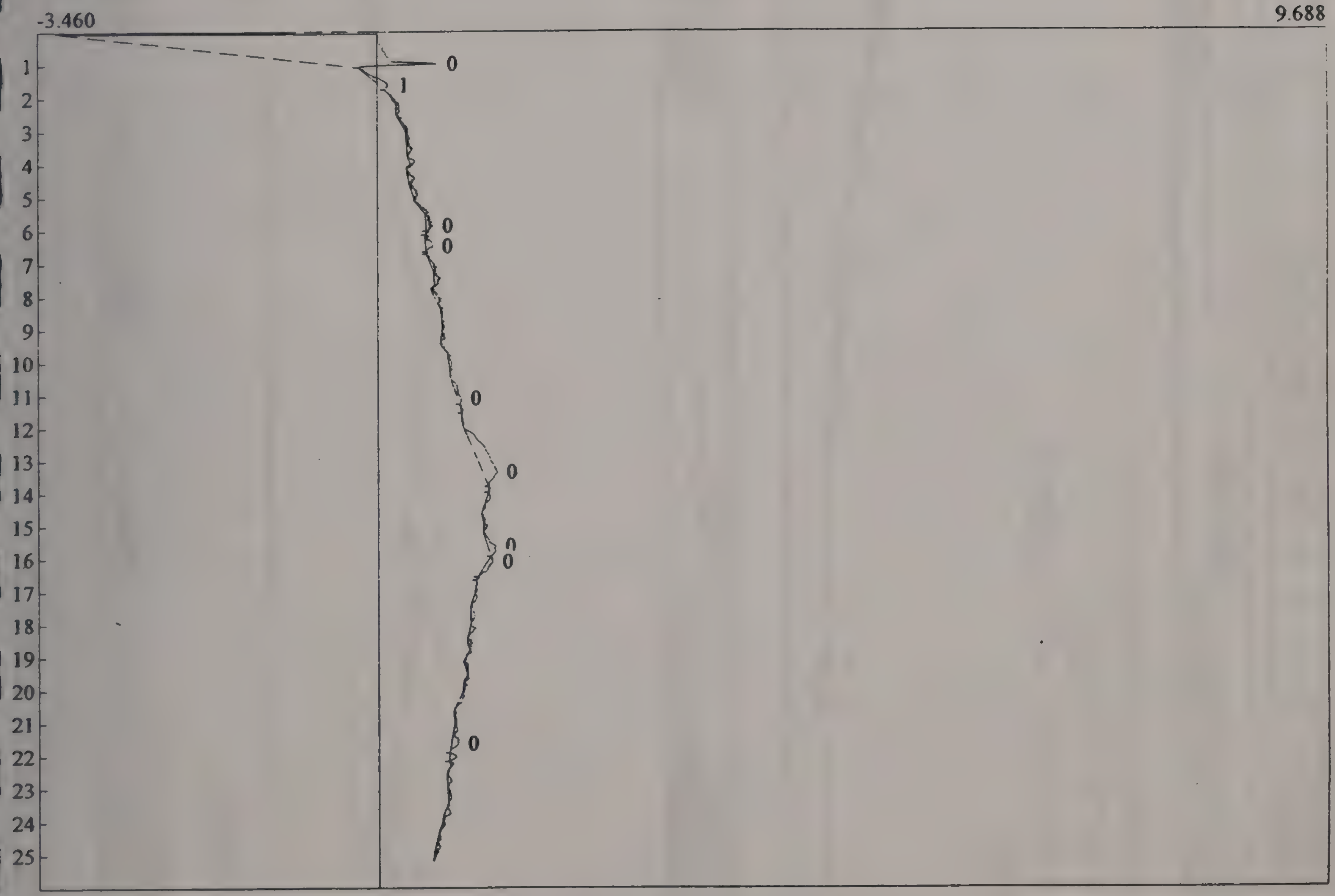


NumberRetention		Component	Area	External	Units
1	1.350	MTBE	1.2220	0.0272	ppmv
5	6.416	toluene	1.4640	0.0208	ppmv
6	7.266	PCE	1.0940	0.0144	ppmv
3			3.7800	0.0623	

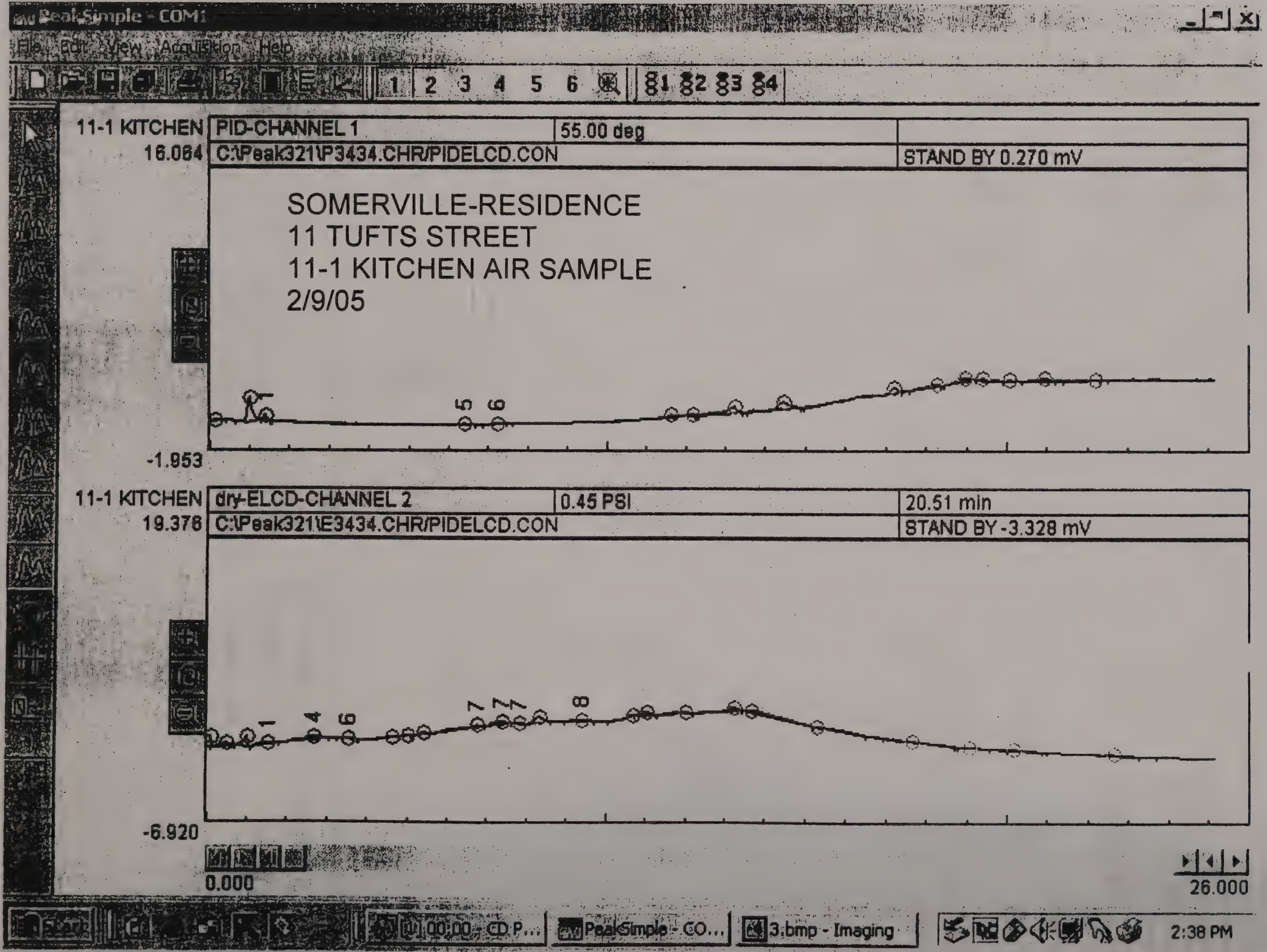
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3435.CHR ()
Sample: 11-B BASEMENT
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



Number	Retention	Component	Area	External	Units
1	1.600	MECL2	2.1000	0.2800	ppmv
1			2.1000	0.2800	



SOMERVILLE-RESIDENCE
11 TUFTS STREET
11-1 KITCHEN AIR SAMPLE
2/9/05

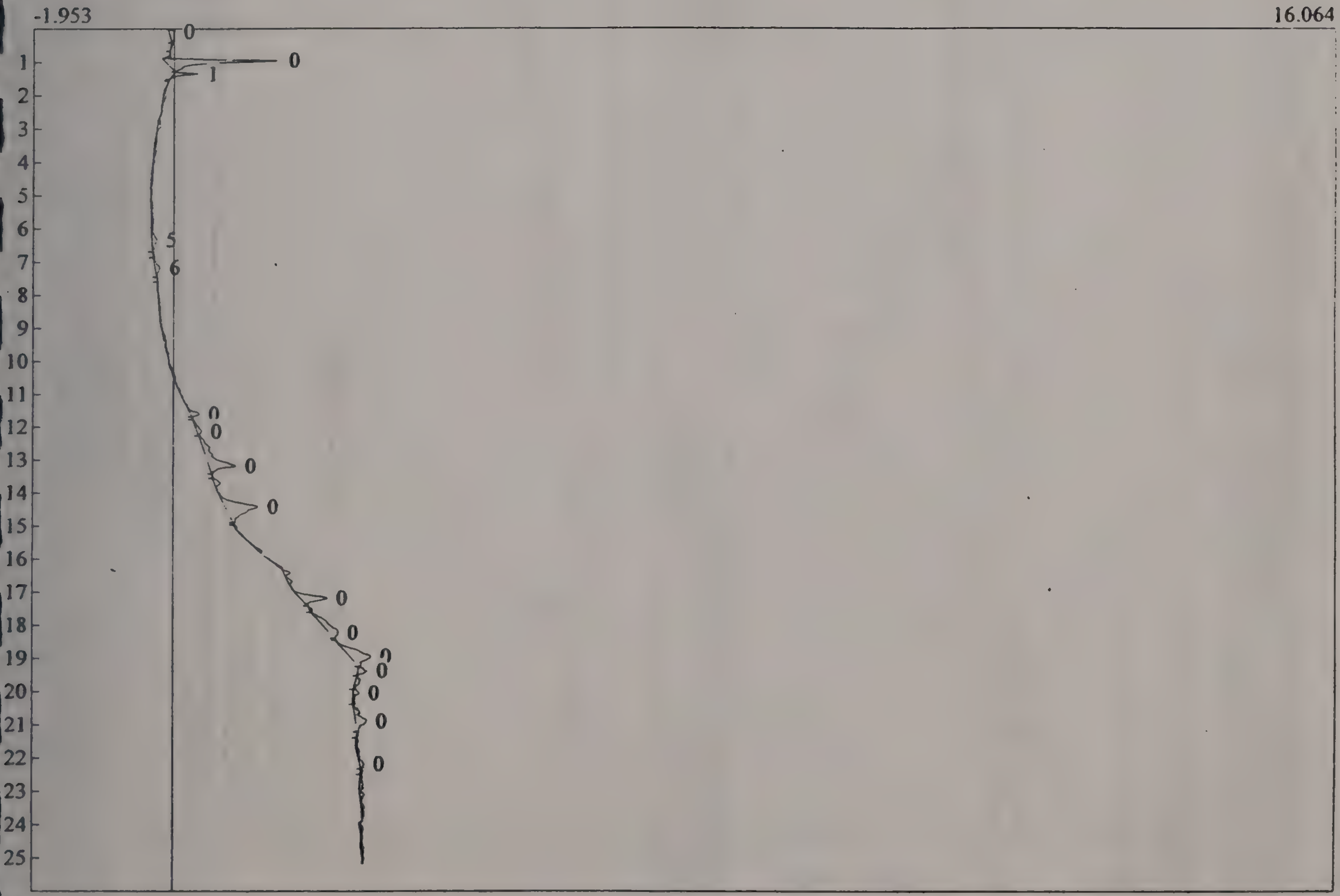
11-1 KITCHEN	PID-CHANNEL 1	55.00 deg	
16.064	C:\Peak321\P3434.CHR/PIDELCD.CON		STAND BY 0.270 mV
-1.953			

11-1 KITCHEN	dry-ELCD-CHANNEL 2	0.45 PSI	20.51 min
19.376	C:\Peak321\E3434.CHR/PIDELCD.CON		STAND BY -3.328 mV
-6.920			

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3434.CHR ()
Sample: 11-1 KITCHEN
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

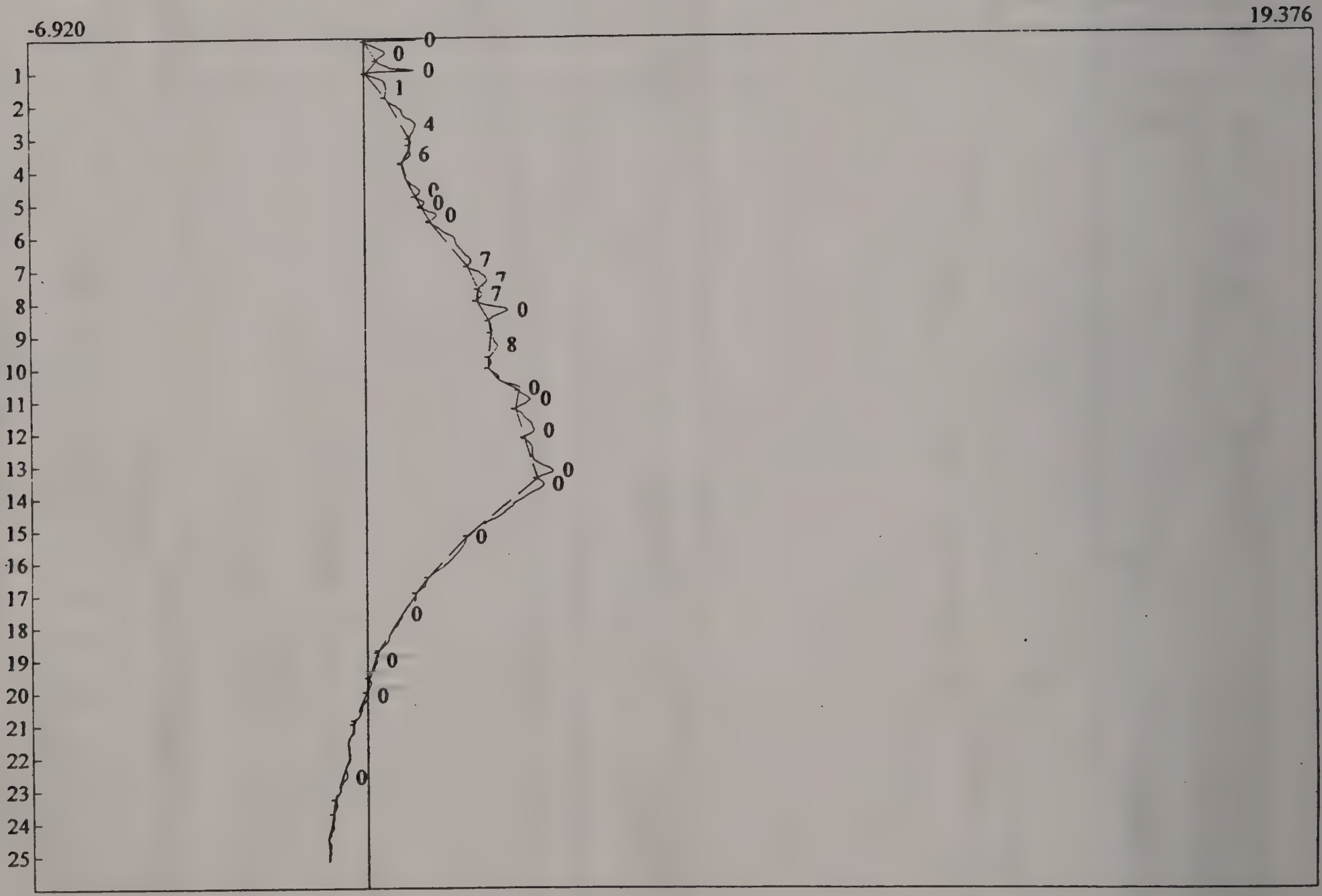


Number	Retention	Component	Area	External	Units
1	1.350	MTBE	1.5220	0.0338	ppmv
5	6.333	toluene	1.4380	0.0204	ppmv
6	7.166	PCE	1.0960	0.0144	ppmv
3			4.0560	0.0687	

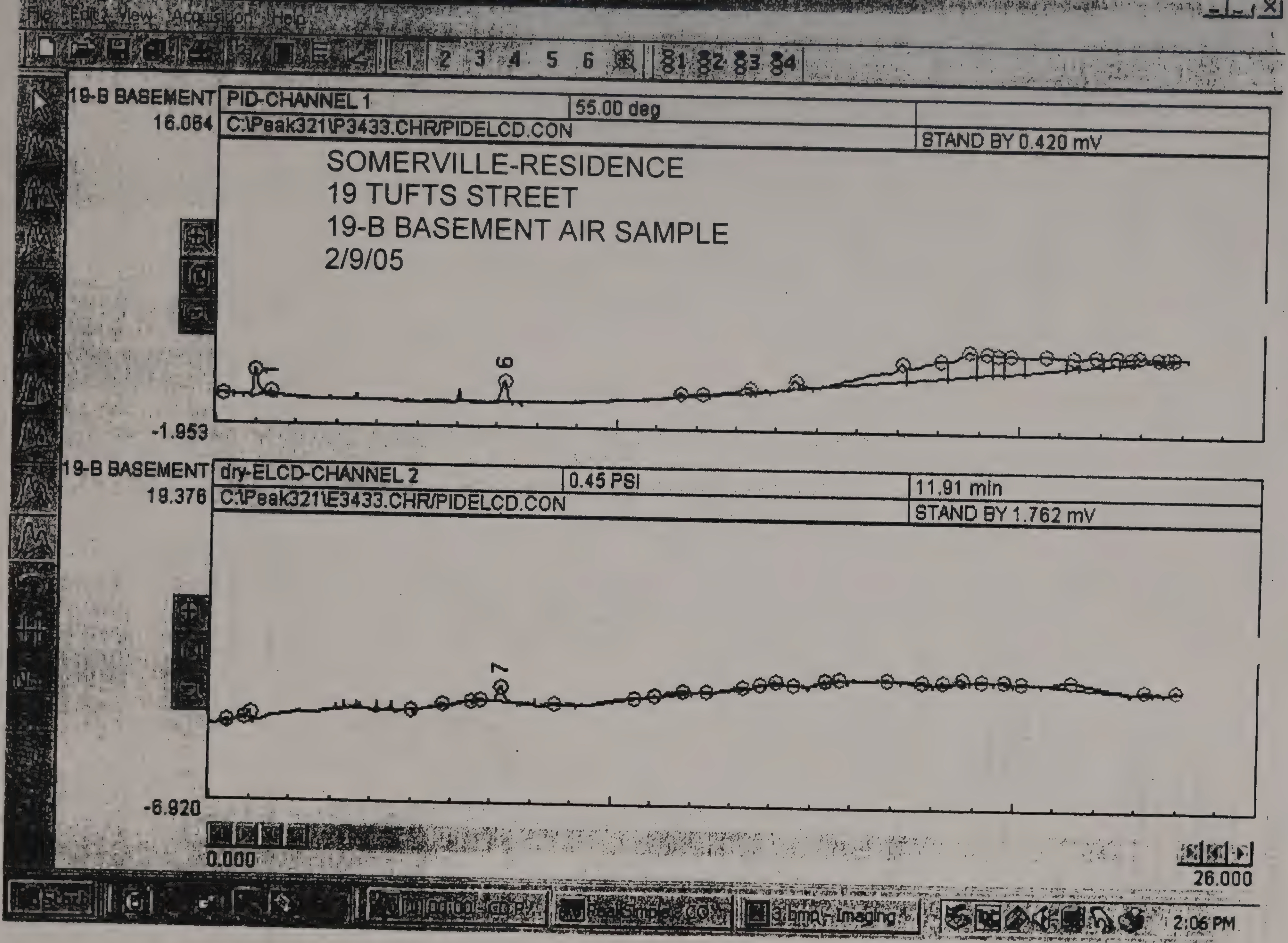
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3434.CHR ()
Sample: 11-1 KITCHEN
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



NumberRetention		Component	Area	External	Units
1	1.483	MECL2	5.8920	0.2800	ppmv
4	2.600	(1_1_1)-TCA	11.0080	0.1800	ppmv
6	3.500	TCE	1.1180	0.1800	ppmv
7	6.716	PCE	10.9380	0.2584	ppmv
7	7.333	PCE	6.4420	0.2047	ppmv
7	7.766	PCE	1.0290	0.1400	ppmv
8	9.333	chlorobenzene	3.8120	0.0169	ppmv
7			40.2390	1.2601	



19-B BASEMENT PID-CHANNEL 1 55.00 deg
C:\Peak321\P3433.CHR/PIDELCD.CON
STAND BY 0.420 mV

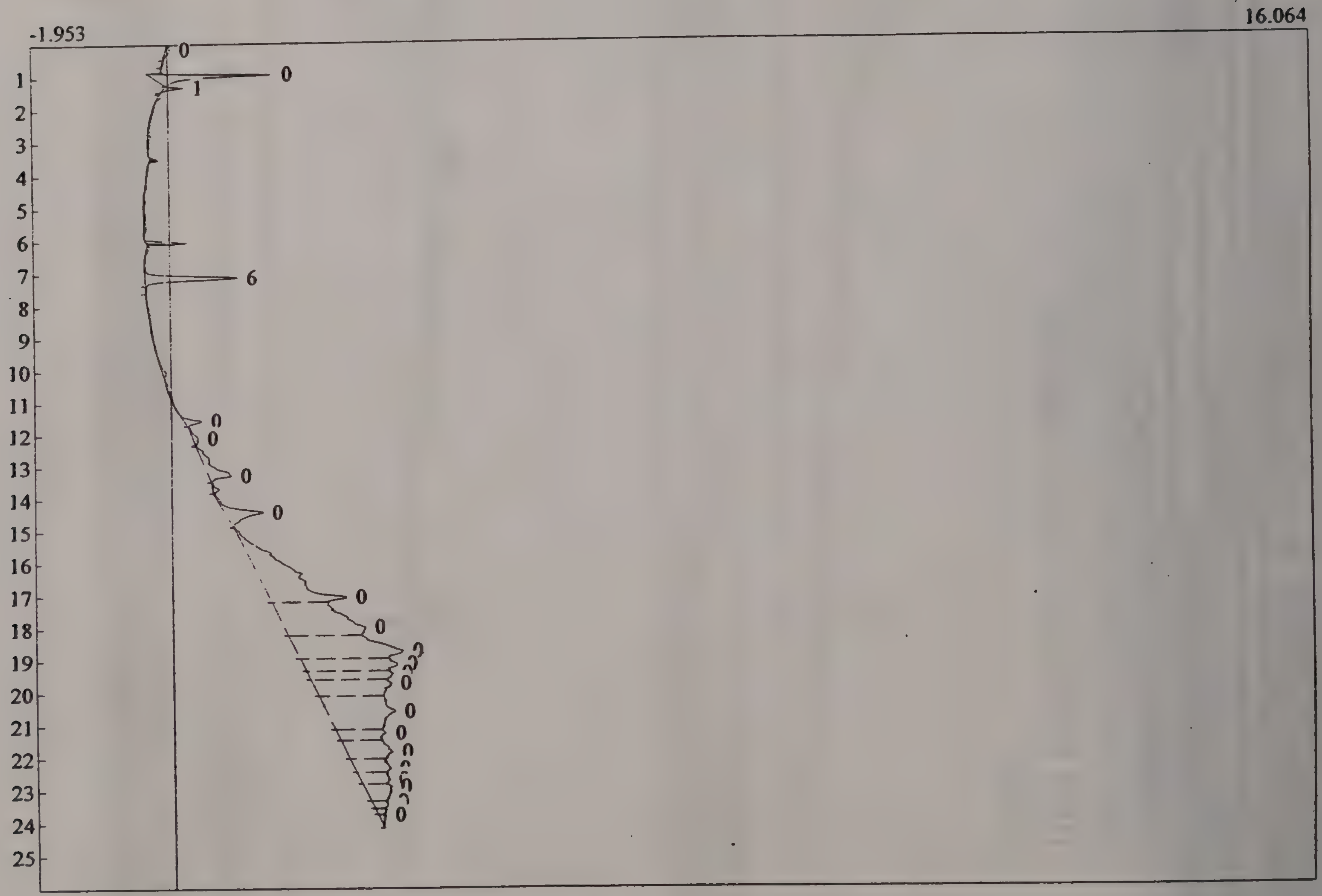
SOMERVILLE-RESIDENCE
19 TUFTS STREET
19-B BASEMENT AIR SAMPLE
2/9/05

19-B BASEMENT dry-ELCD-CHANNEL 2 0.45 PSI 11.91 min
C:\Peak321\E3433.CHR/PIDELCD.CON
STAND BY 1.762 mV

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3433.CHR ()
Sample: 19-B BASEMENT
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

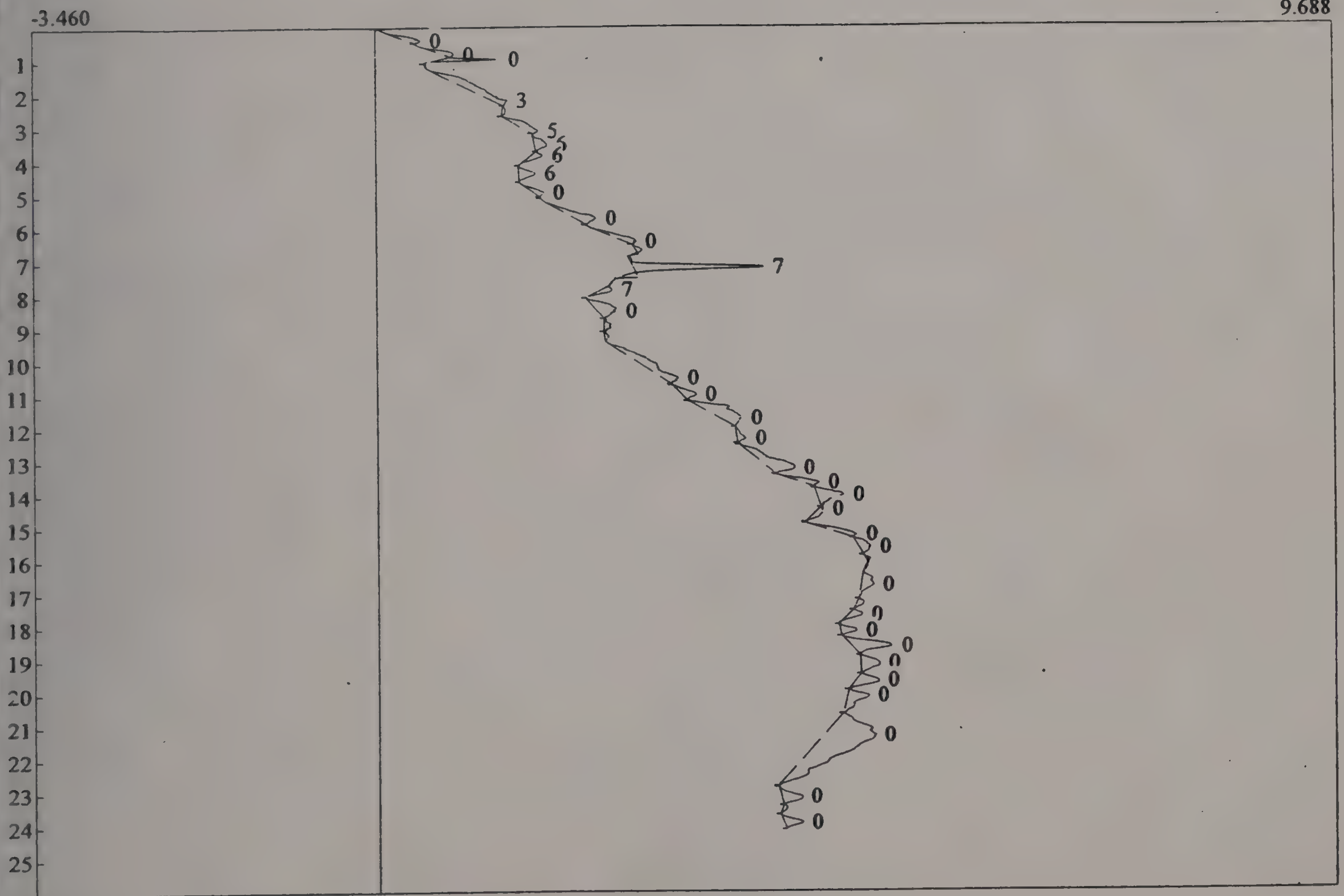


NumbeiRetention		Component	Area	External	Units
1	1.316	MTBE	1.1760	0.0262	ppmv
6	7.133	PCE	12.0270	0.1599	ppmv
2			13.2030	0.1861	

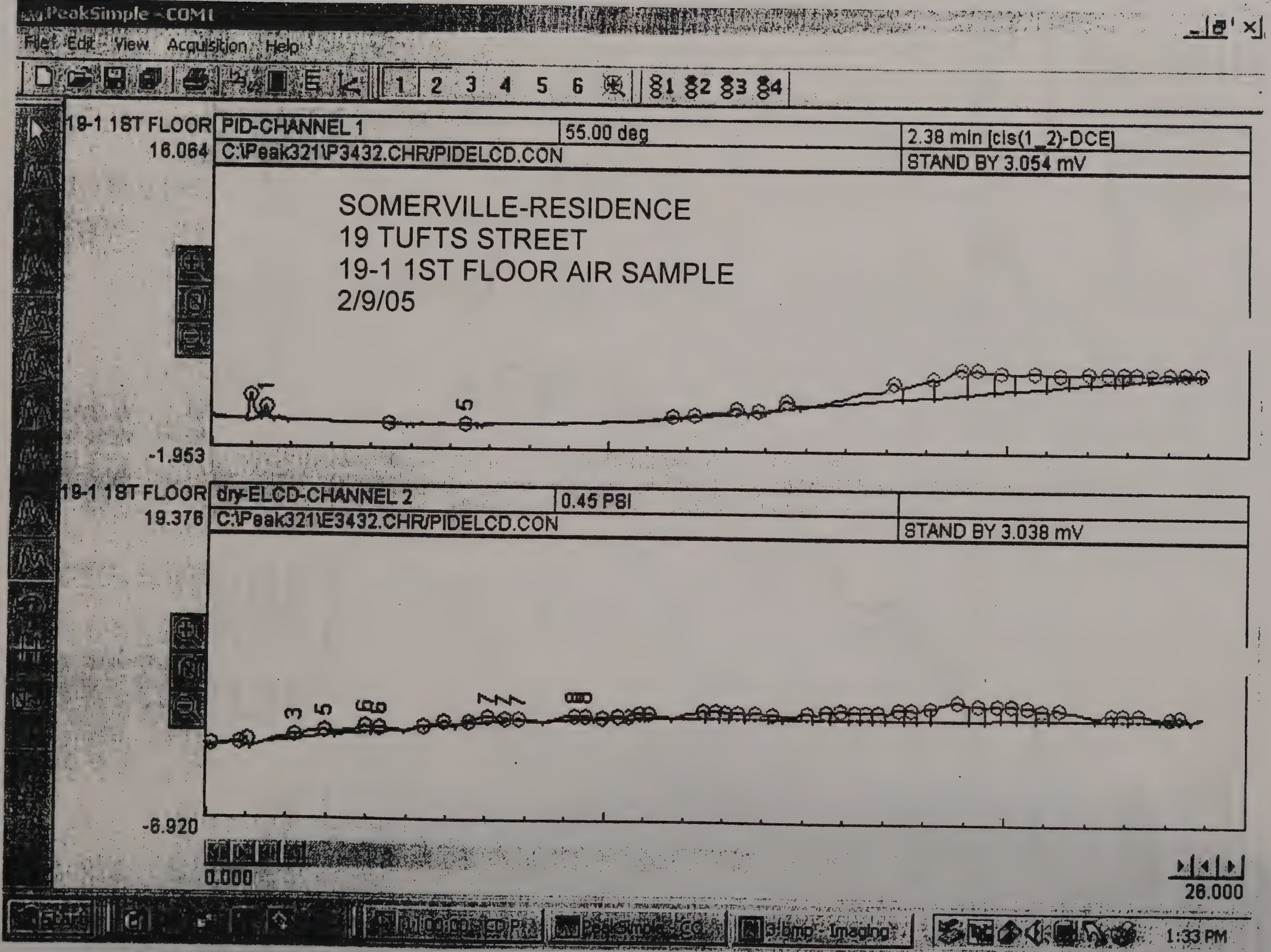
Lab name: NERO LAB
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: E3433.CHR ()
Sample: 19-B BASEMENT
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



NumberRetention		Component	Area	External	Units
3	2.183	cis(1_2)-DCE	7.6080	0.3010	ppmv
5	3.100	(1_2)-DCA	2.8860	0.2388	ppmv
6	3.483	TCE	2.1520	0.1914	ppmv
6	3.816	TCE	1.4830	0.1841	ppmv
6	4.350	TCE	2.1420	0.1913	ppmv
7	7.183	PCE	10.6900	0.2557	ppmv
7	7.850	PCE	1.3700	0.1444	ppmv
7			28.3310	1.5067	



19-1 1ST FLOOR PID-CHANNEL 1 | 55.00 deg | 2.38 min [cis(1_2)-DCE]
16.064 C:\Peak321\P3432.CHR/PIDELCD.CON | STAND BY 3.054 mV

SOMERVILLE-RESIDENCE
19 TUFTS STREET
19-1 1ST FLOOR AIR SAMPLE
2/9/05

-1.953

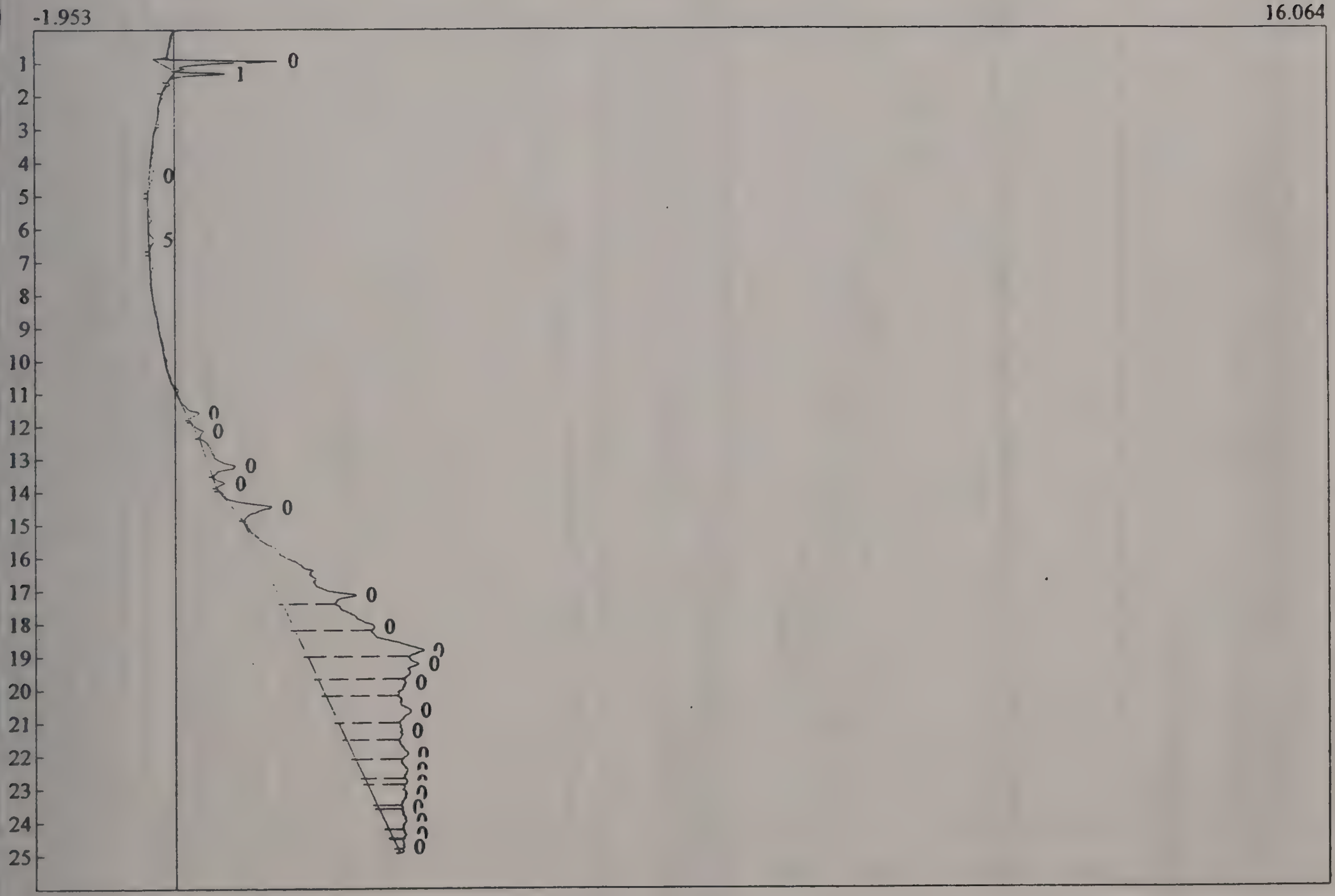
19-1 1ST FLOOR dry-ELCD-CHANNEL 2 | 0.45 PSI
19.376 C:\Peak321\E3432.CHR/PIDELCD.CON | STAND BY 3.038 mV

-6.920

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3432.CHR ()
Sample: 19-1 1ST FLOOR
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

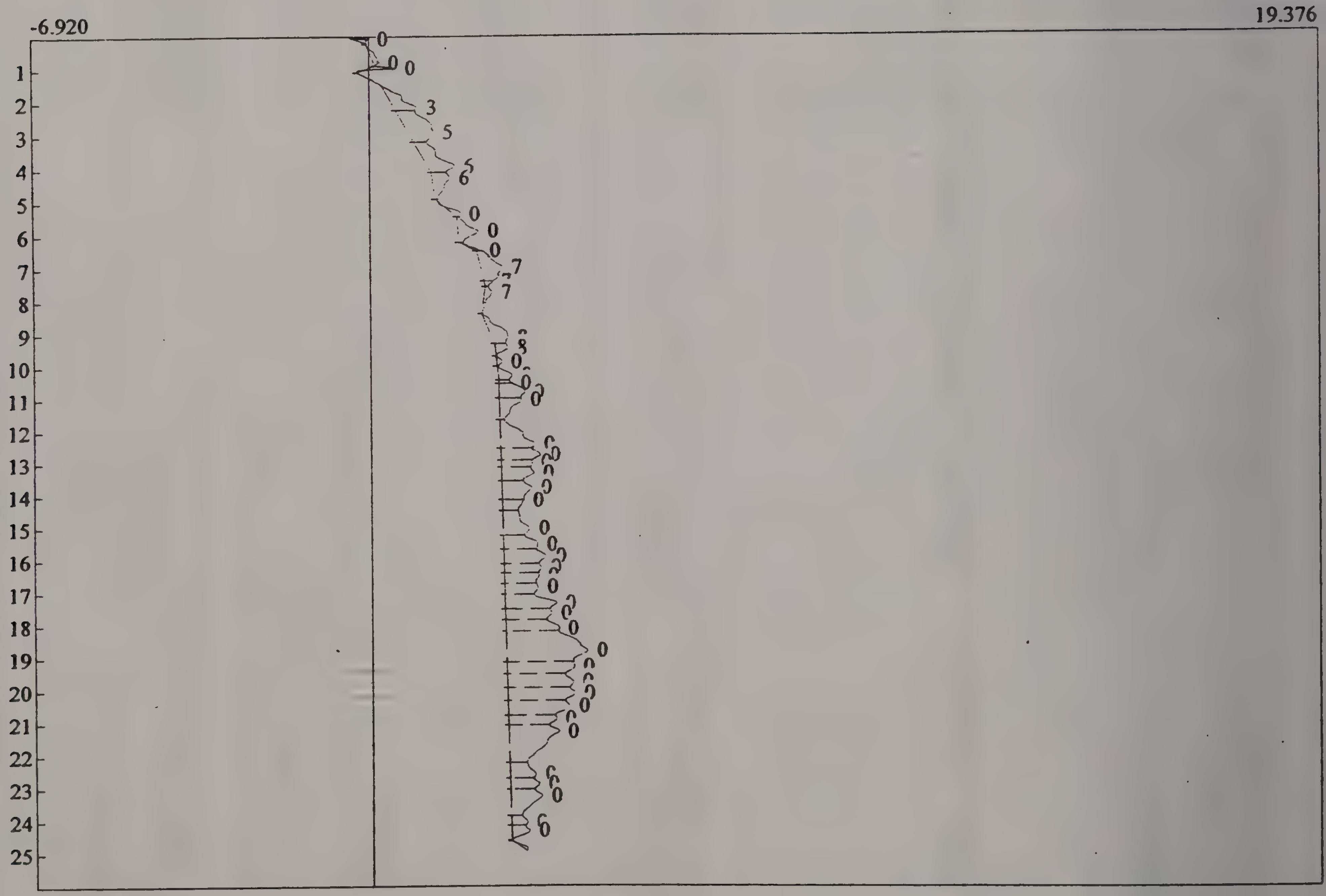


Number	Retention	Component	Area	External	Units
1	1.316	MTBE	4.1620	0.0926	ppmv
5	6.316	toluene	1.3290	0.0189	ppmv
2			5.4910	0.1114	

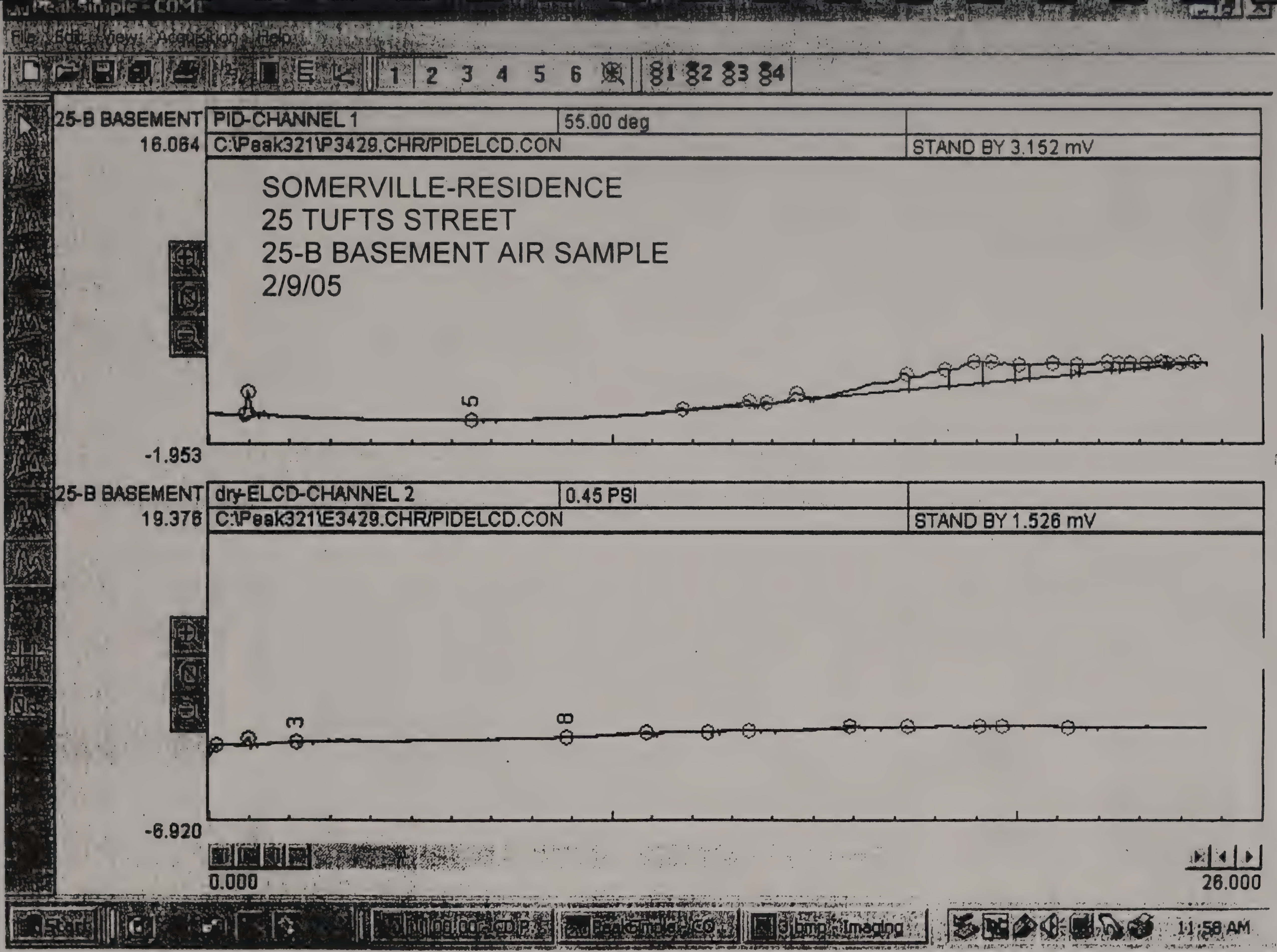
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3432.CHR ()
Sample: 19-1 1ST FLOOR
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



NumbeiRetention		Component	Area	External	Units
3	2.150	cis(1_2)-DCE	11.7920	0.0714	ppmv
5	2.900	(1_2)-DCA	26.7800	0.0919	ppmv
6	3.933	TCE	20.3130	0.0576	ppmv
6	4.283	TCE	11.2065	0.0318	ppmv
7	7.000	PCE	16.8475	0.0285	ppmv
7	7.433	PCE	1.2600	0.0021	ppmv
7	7.766	PCE	3.5530	0.0060	ppmv
8	9.166	chlorobenzene	11.8350	0.0535	ppmv
8	9.466	chlorobenzene	3.8330	0.0173	ppmv
9			107.4200	0.3603	



25-B BASEMENT | PID-CHANNEL 1 | 55.00 deg
C:\Peak321\P3429.CHR/PIDELCD.CON | STAND BY 3.152 mV

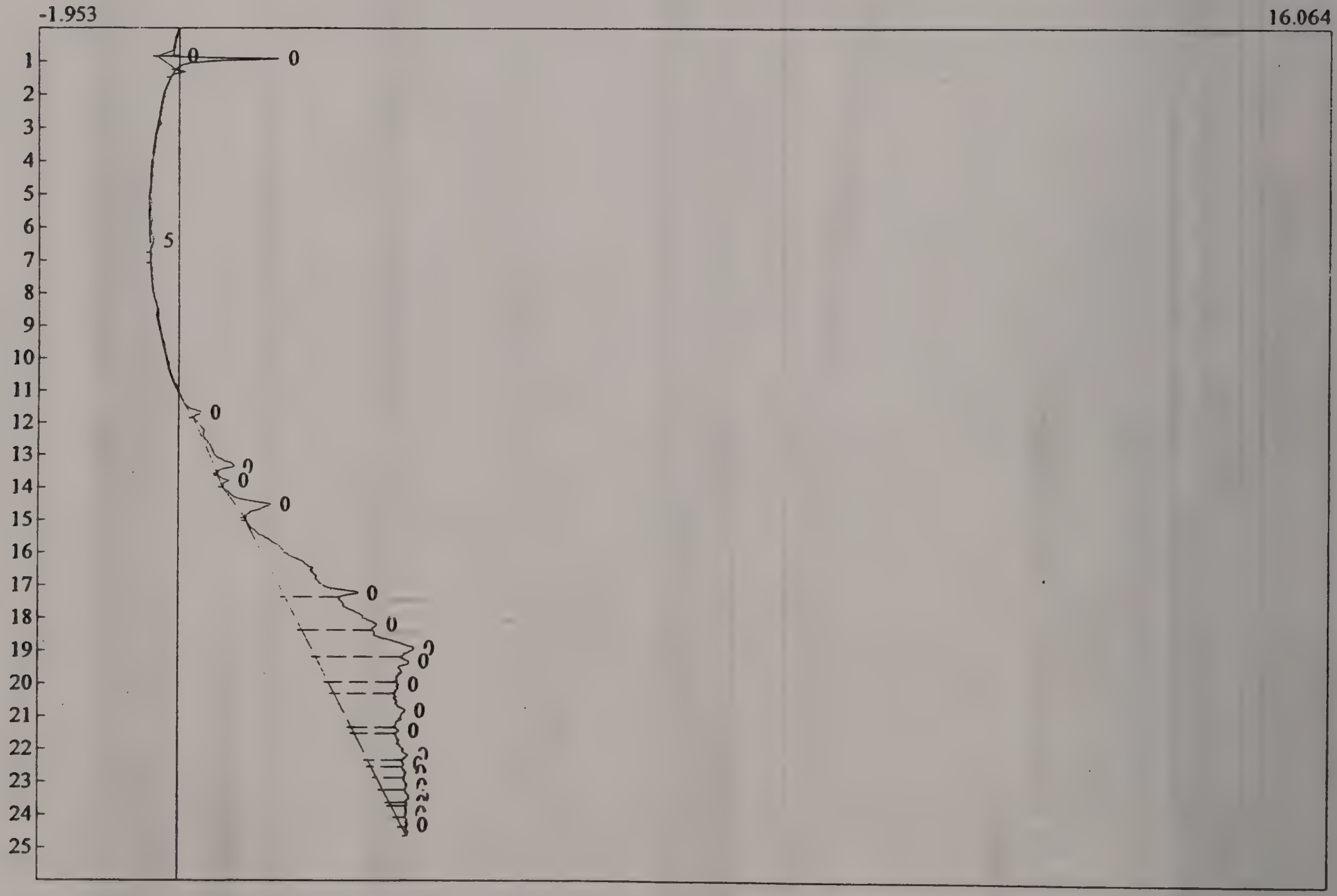
SOMERVILLE-RESIDENCE
25 TUFTS STREET
25-B BASEMENT AIR SAMPLE
2/9/05

25-B BASEMENT | dry-ELCD-CHANNEL 2 | 0.45 PSI
C:\Peak321\E3429.CHR/PIDELCD.CON | STAND BY 1.526 mV

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3429.CHR ()
Sample: 25-B BASEMENT
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

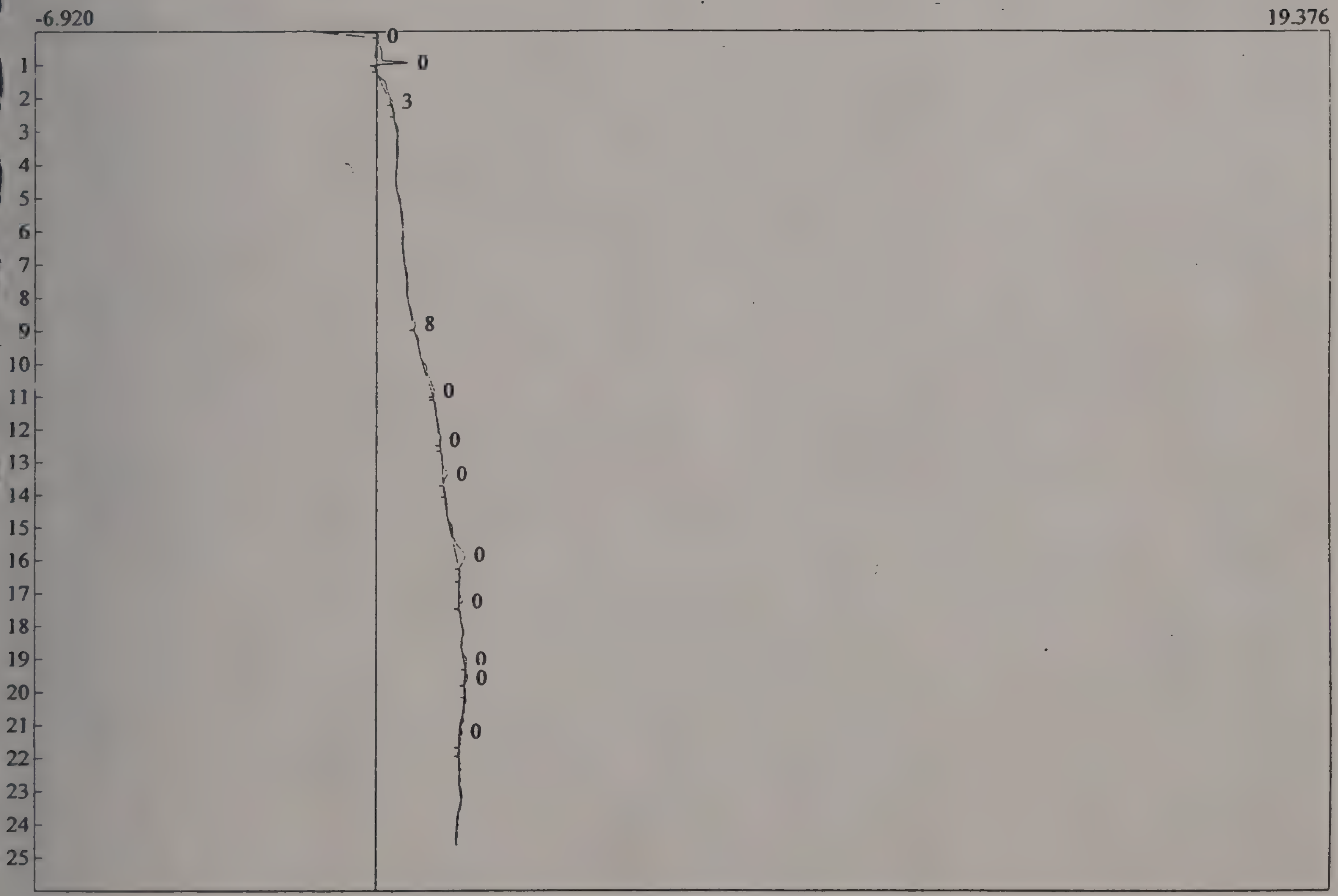


Number	Retention	Component	Area	External	Units
5	6.416	toluene	1.2340	0.0175	ppmv
1			1.2340	0.0175	

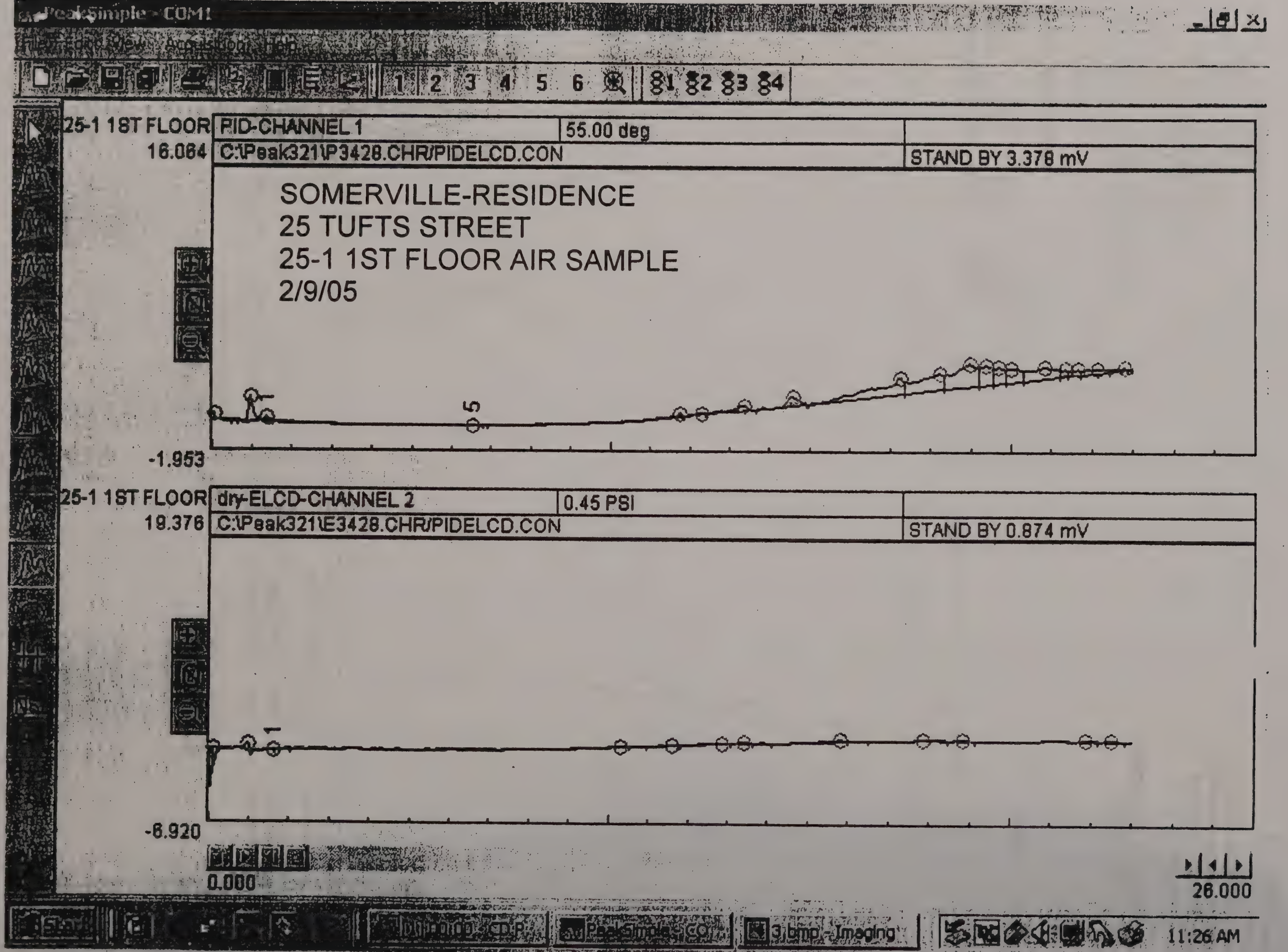
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3429.CHR ()
Sample: 25-B BASEMENT
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



Number	Retention	Component	Area	External	Units
3	2.100	cis(1_2)-DCE	2.7670	0.2500	ppmv
8	8.800	chlorobenzene	1.1440	0.0411	ppmv
2			3.9110	0.2911	



SOMERVILLE-RESIDENCE
25 TUFTS STREET
25-1 1ST FLOOR AIR SAMPLE
2/9/05

25-1 1ST FLOOR
16.064
-1.953

PID-CHANNEL 1
55.00 deg
C:\Peak321\P3428.CHR/PIDELCD.CON
STAND BY 3.378 mV

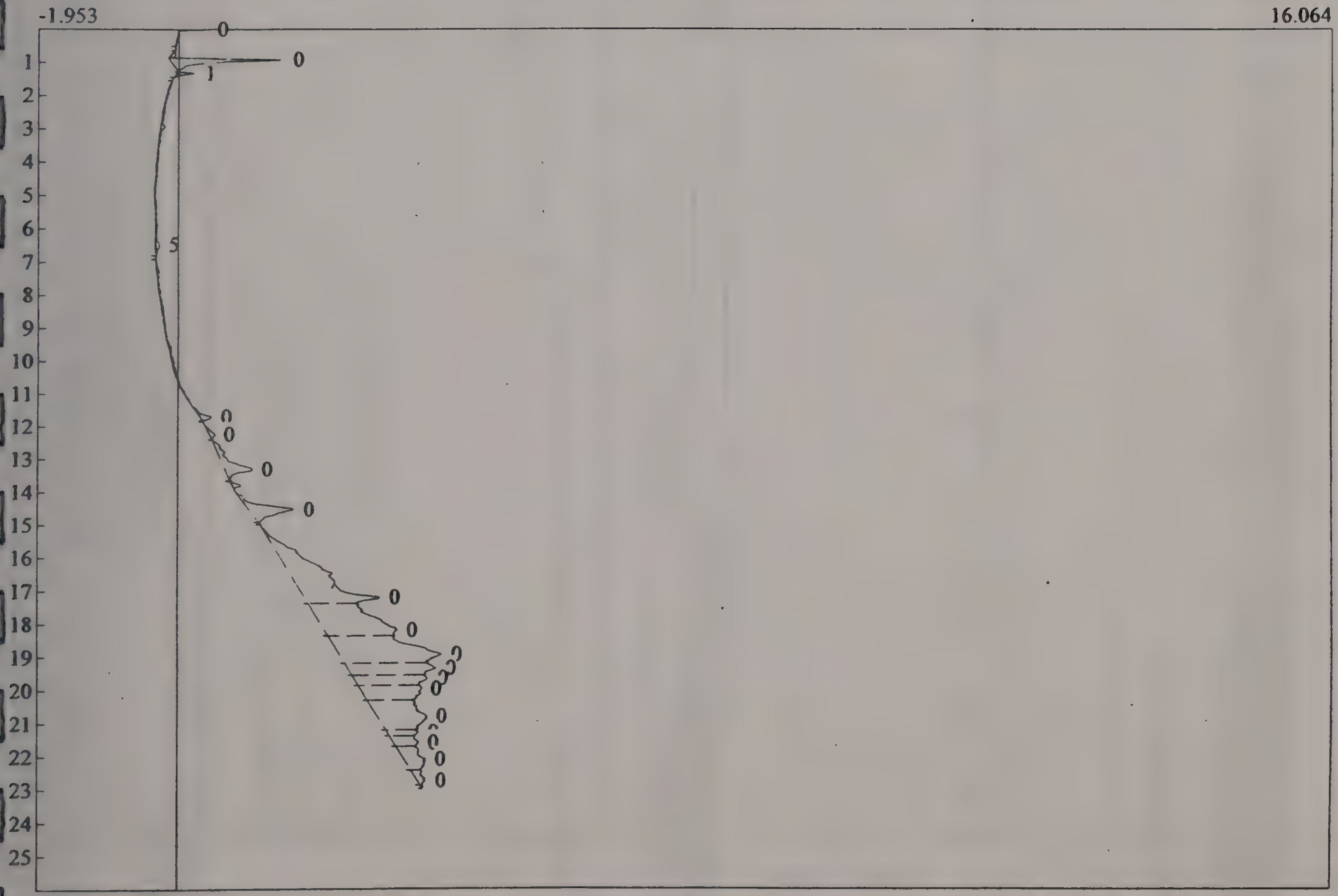
25-1 1ST FLOOR
19.376
-6.920

dry-ELCD-CHANNEL 2
0.45 PSI
C:\Peak321\E3428.CHR/PIDELCD.CON
STAND BY 0.874 mV

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3428.CHR ()
Sample: 25-1 1ST FLOOR
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

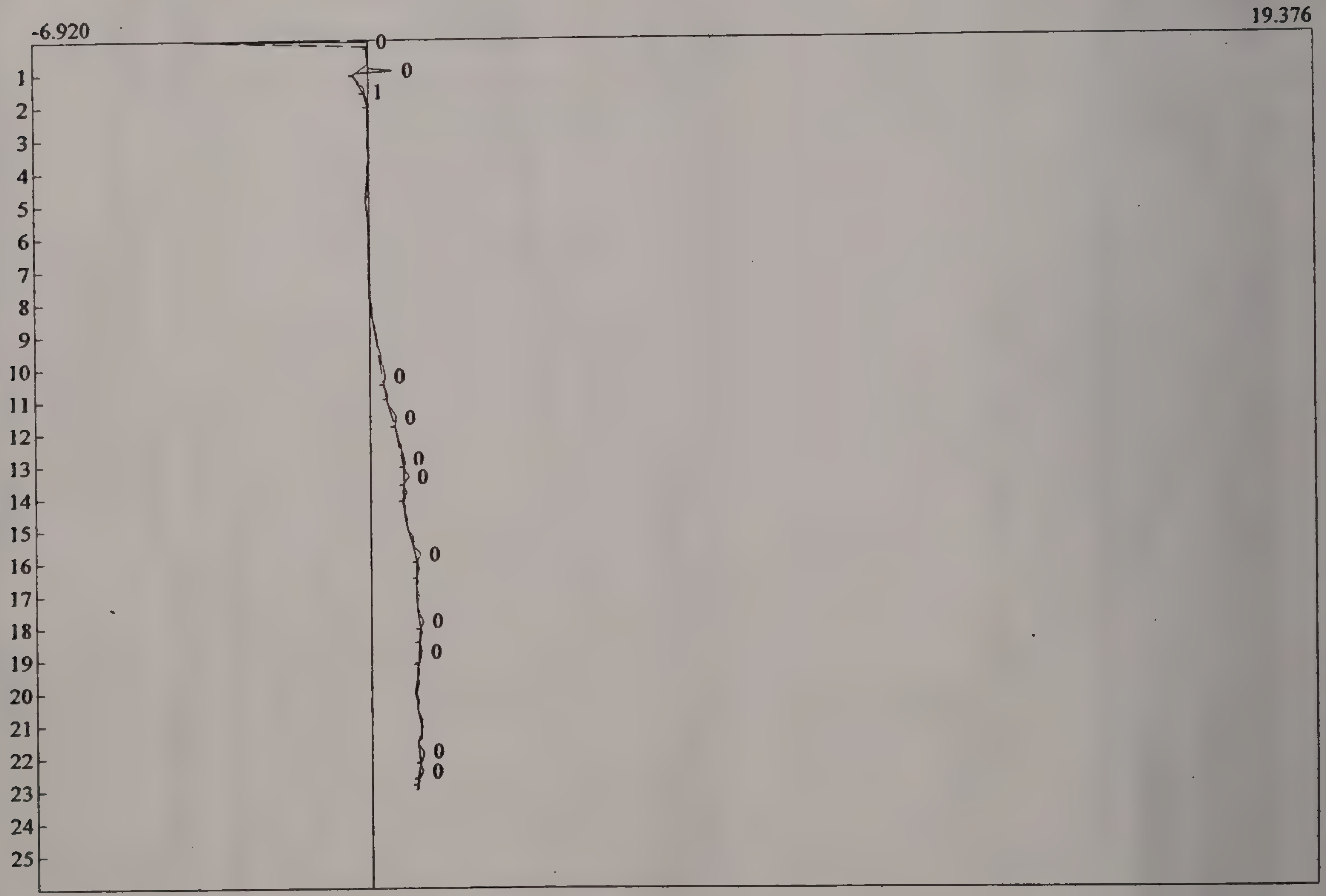


Number	Retention	Component	Area	External	Units
1	1.316	MTBE	1.0800	0.0240	ppmv
5	6.483	toluene	1.1000	0.0156	ppmv
2			2.1800	0.0396	

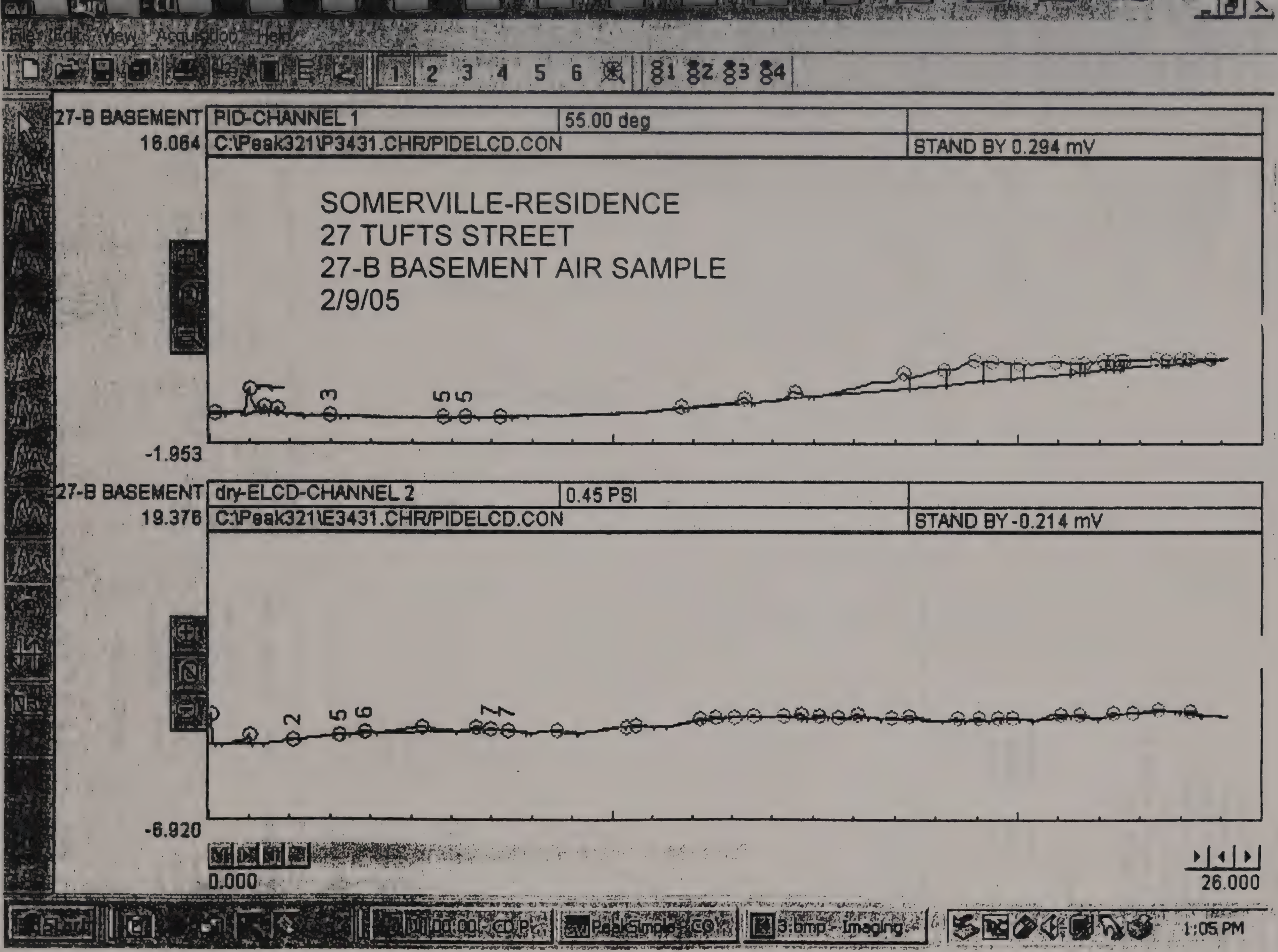
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3428.CHR ()
Sample: 25-1 1ST FLOOR
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



Numbei	Retention	Component	Area	External	Units
1	1.566	MECL2	1.0400	0.2800	ppmv
1			1.0400	0.2800	



27-B BASEMENT 16.064 | PID-CHANNEL 1 | 55.00 deg
C:\Peak321\P3431.CHR/PIDELCD.CON
STAND BY 0.294 mV

SOMERVILLE-RESIDENCE
27 TUFTS STREET
27-B BASEMENT AIR SAMPLE
2/9/05

-1.953

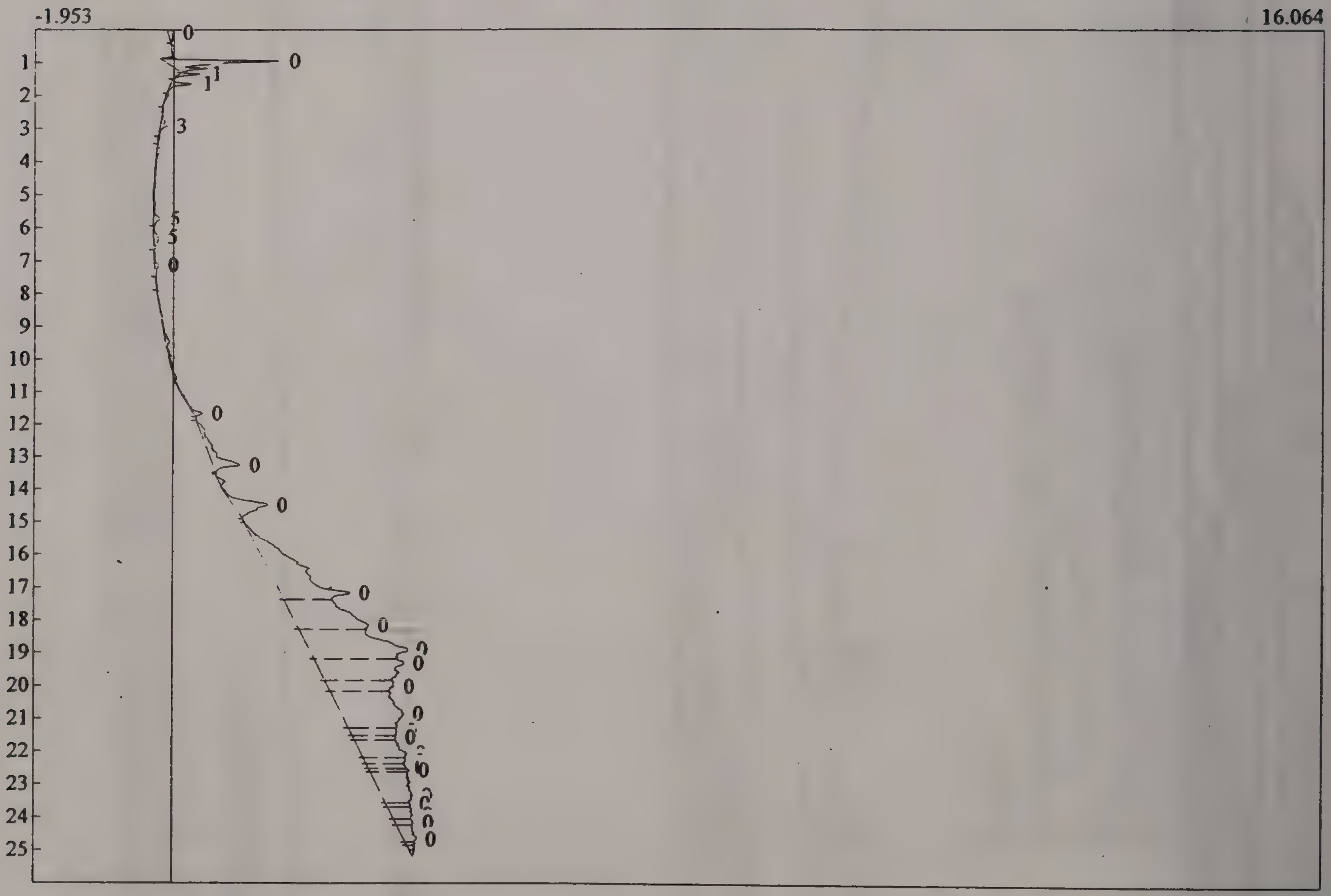
27-B BASEMENT 19.376 | dry-ELCD-CHANNEL 2 | 0.45 PSI
C:\Peak321\E3431.CHR/PIDELCD.CON
STAND BY -0.214 mV

-6.920

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3431.CHR ()
Sample: 27-B BASEMENT
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

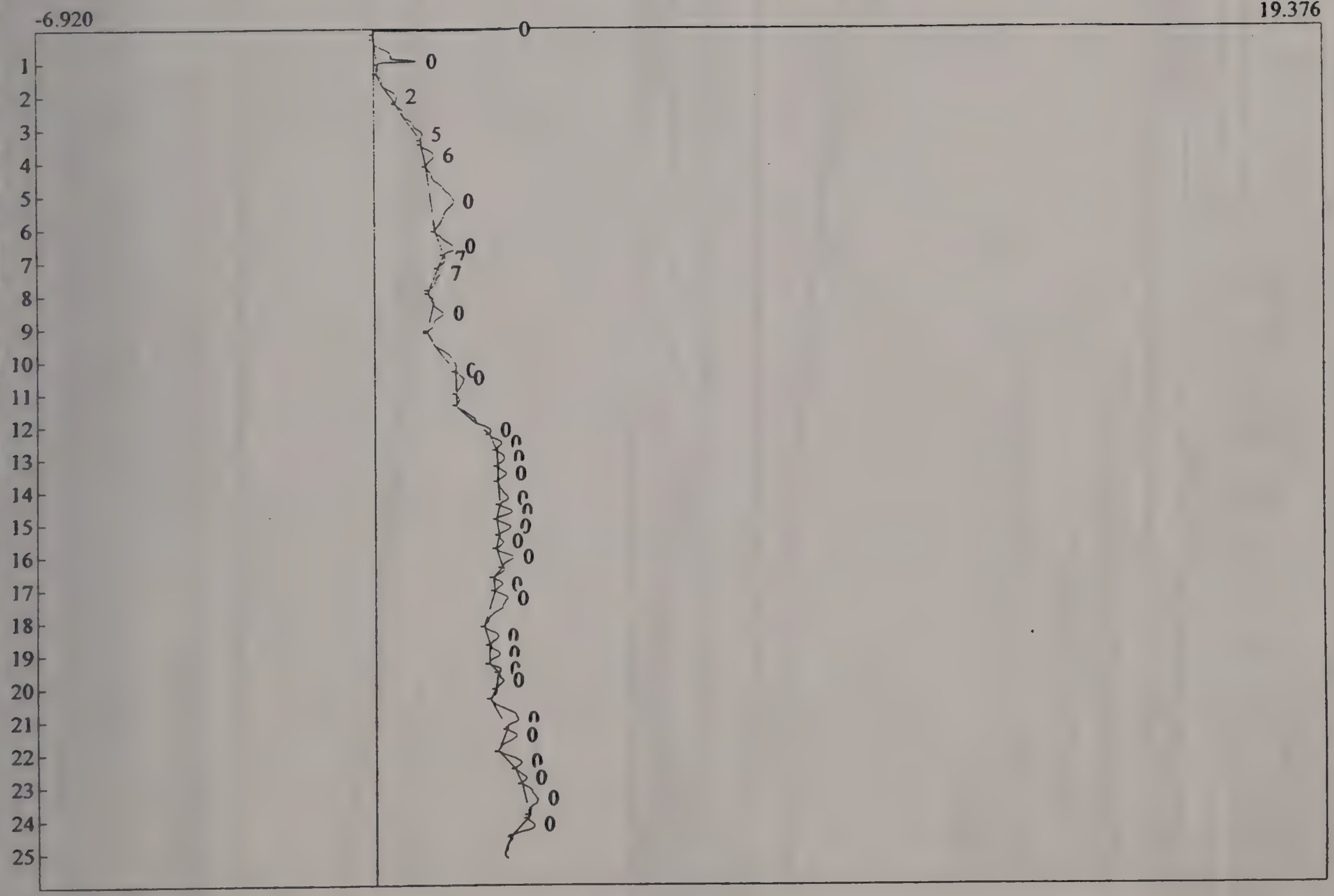


Number	Retention	Component	Area	External	Units
1	1.333	MTBE	1.3180	0.0293	ppmv
1	1.633	MTBE	1.9320	0.0430	ppmv
3	2.916	benzene	1.1160	0.0144	ppmv
5	5.733	toluene	1.1920	0.0169	ppmv
5	6.283	toluene	1.4930	0.0212	ppmv
5			7.0510	0.1248	

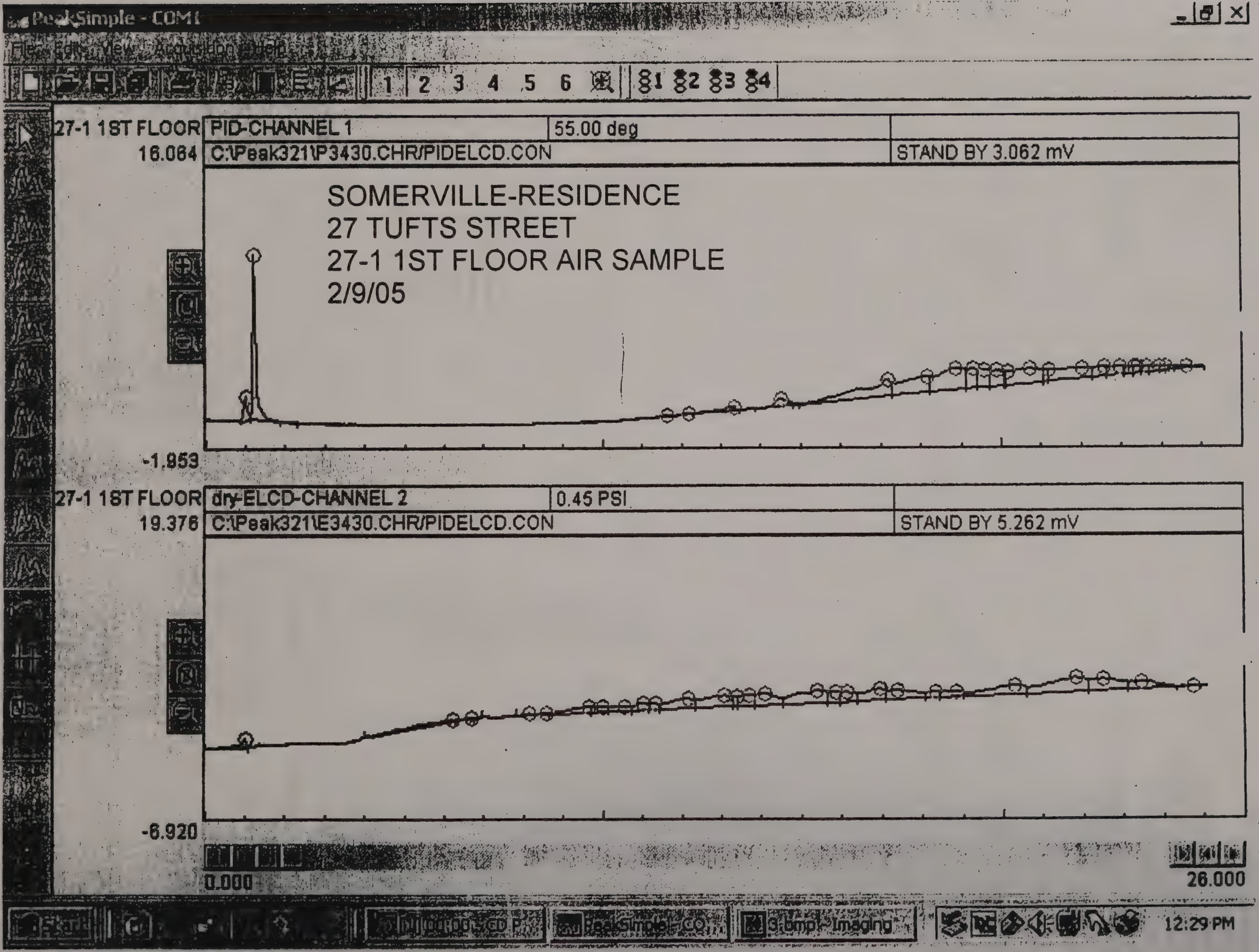
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3431.CHR ()
Sample: 27-B BASEMENT
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



Numbei	Retention	Component	Area	External	Units
2	2.016	(1_1)-DCA	2.4600	0.2400	ppmv
5	3.166	(1_2)-DCA	3.1380	0.2400	ppmv
6	3.800	TCE	4.3020	0.1800	ppmv
7	6.900	PCE	1.0180	0.0582	ppmv
7	7.350	PCE	2.4480	0.1400	ppmv
5			13.3660	0.8582	



27-1 1ST FLOOR | PID-CHANNEL 1 | 55.00 deg

16.064 | C:\Peak321\P3430.CHR/PIDELCD.CON | STAND BY 3.062 mV

SOMERVILLE-RESIDENCE
27 TUFTS STREET
27-1 1ST FLOOR AIR SAMPLE
2/9/05

-1.953

27-1 1ST FLOOR | dry-ELCD-CHANNEL 2 | 0.45 PSI

19.376 | C:\Peak321\E3430.CHR/PIDELCD.CON | STAND BY 5.262 mV

-6.920

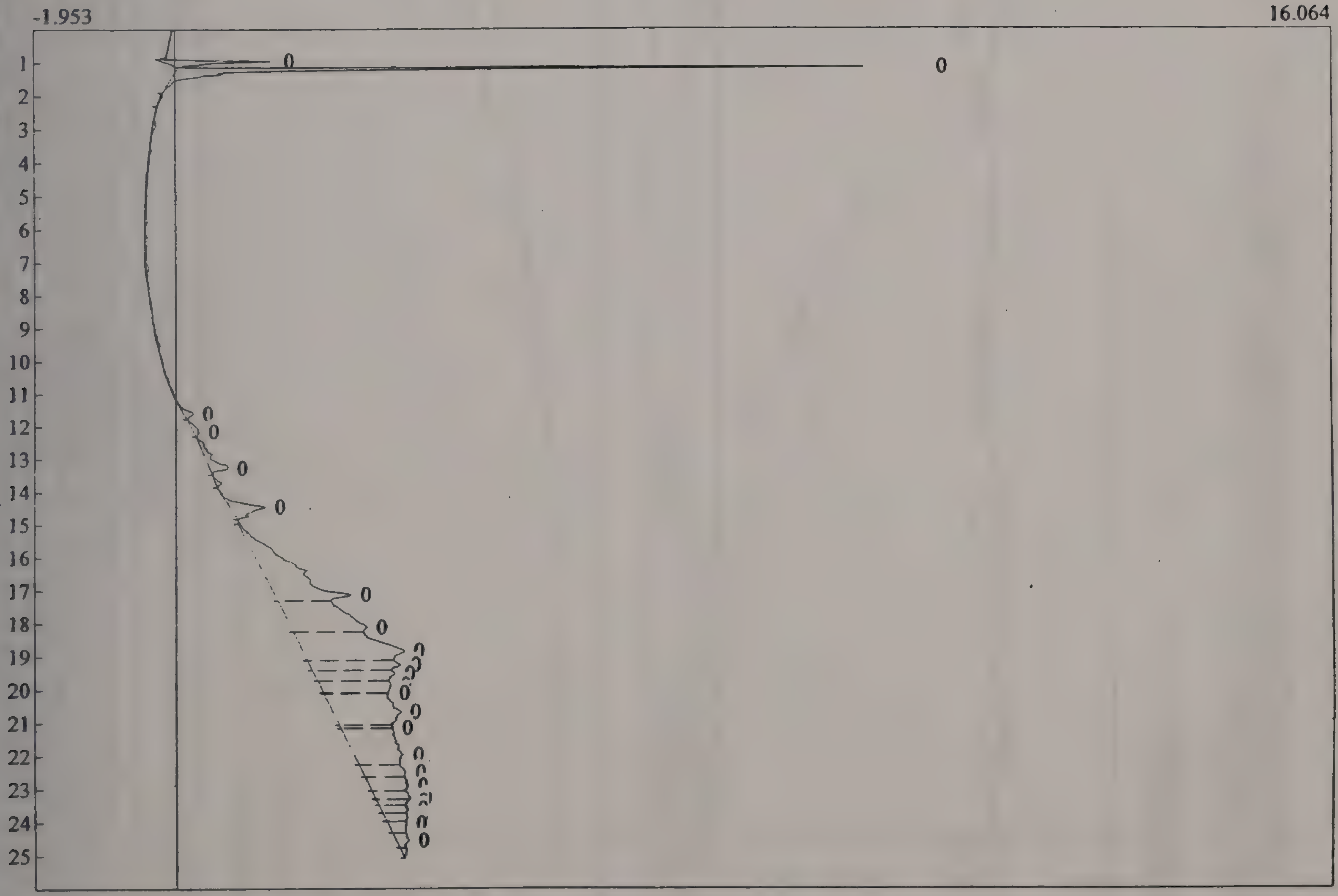
0.000

26.000

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3430.CHR ()
Sample: 27-1 1ST FLOOR
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

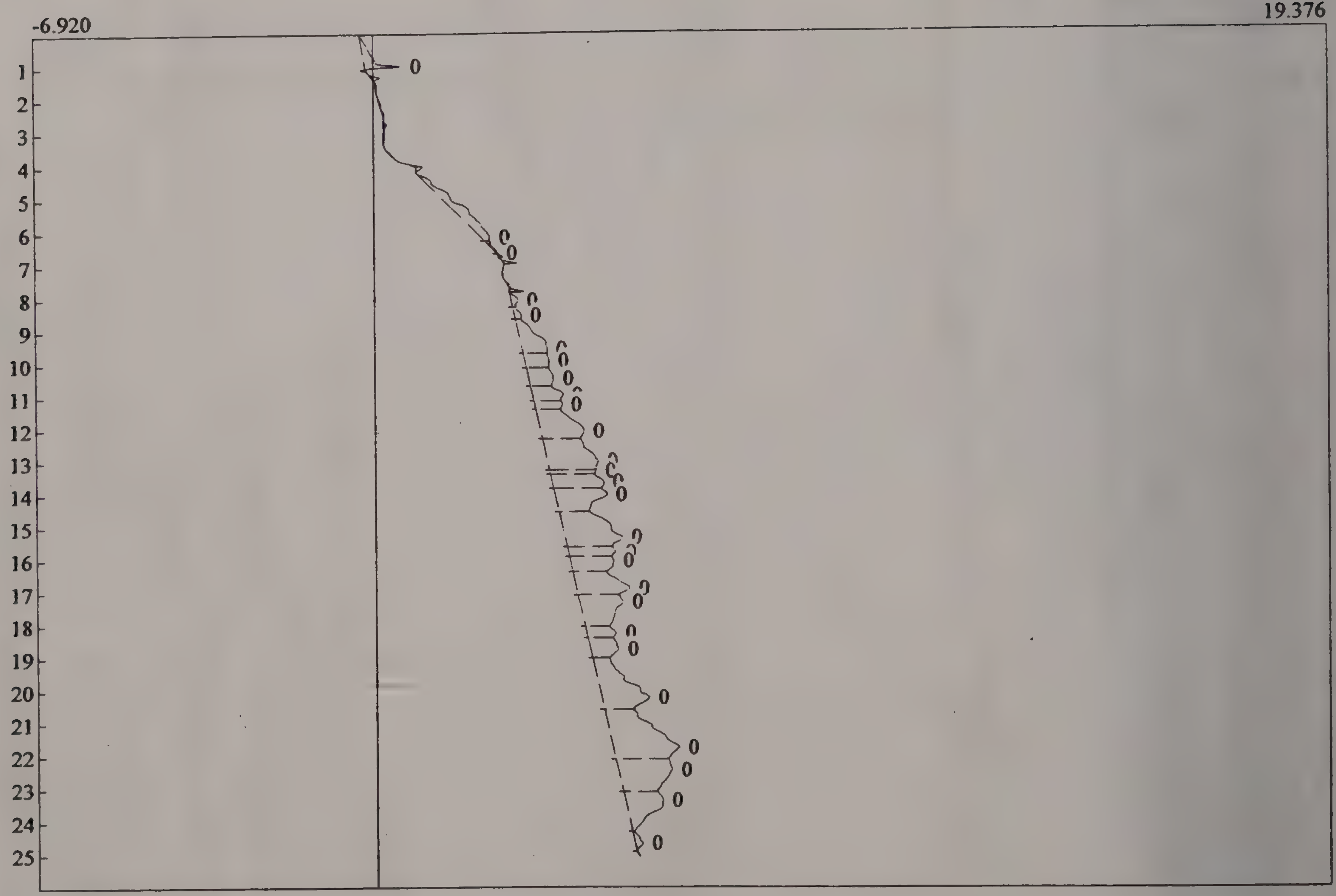


NumberRetention	Component	Area	External	Units
0		0.0000	0.0000	

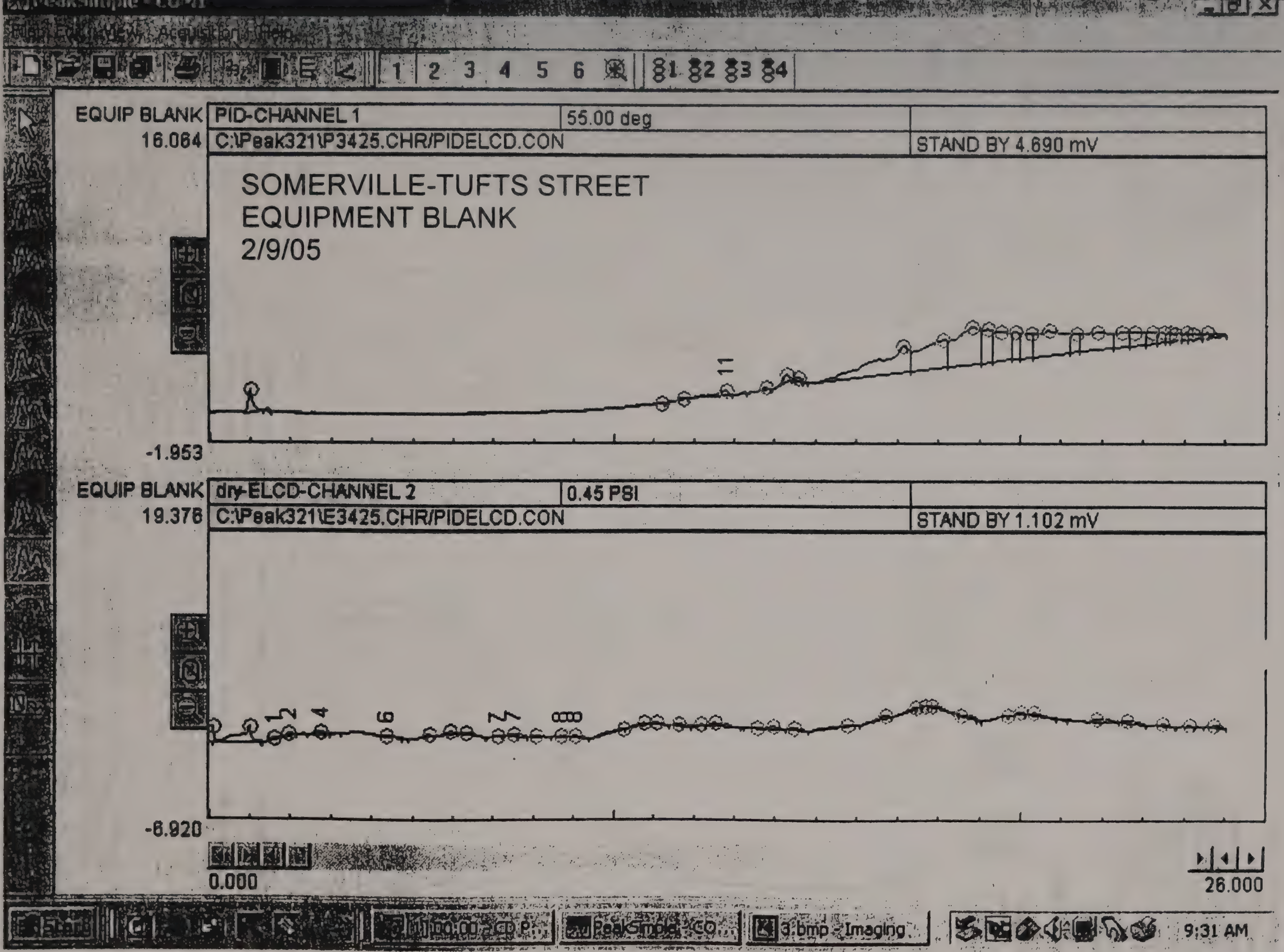
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3430.CHR ()
Sample: 27-1 1ST FLOOR
Operator: 1

Pressure program:

Init temp	Hold	Ramp	Final temp



NumbeiRetention	Component	Area	External	Units
0		0.0000	0.0000	



SOMERVILLE-TUFTS STREET
EQUIPMENT BLANK
2/9/05

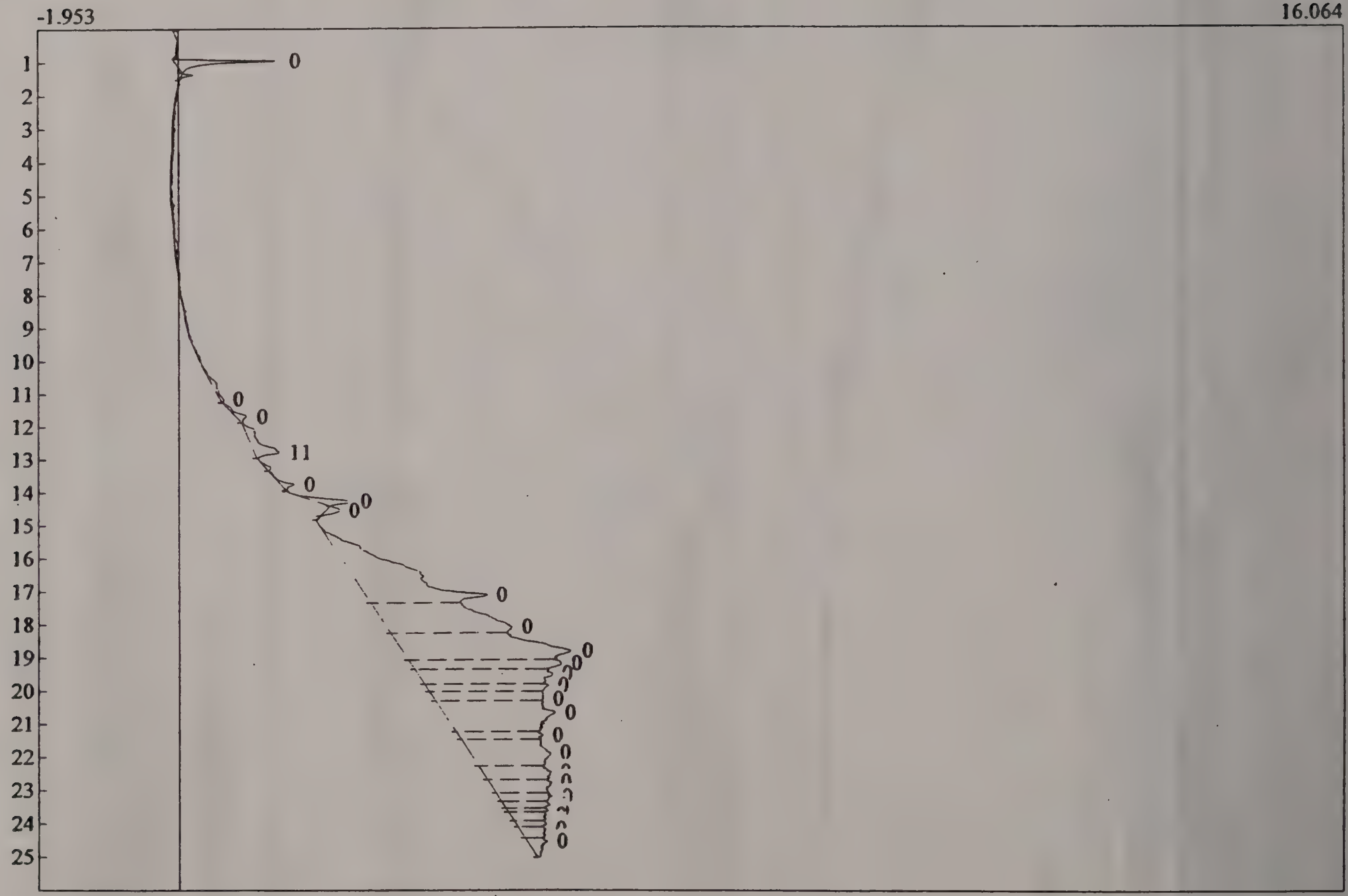
EQUIP BLANK PID-CHANNEL 1 55.00 deg
C:\Peak321\P3425.CHR/PIDELCD.CON
STAND BY 4.690 mV

EQUIP BLANK dry-ELCD-CHANNEL 2 0.45 PSI
C:\Peak321\E3425.CHR/PIDELCD.CON
STAND BY 1.102 mV

Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3425.CHR ()
Sample: EQUIP BLANK
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

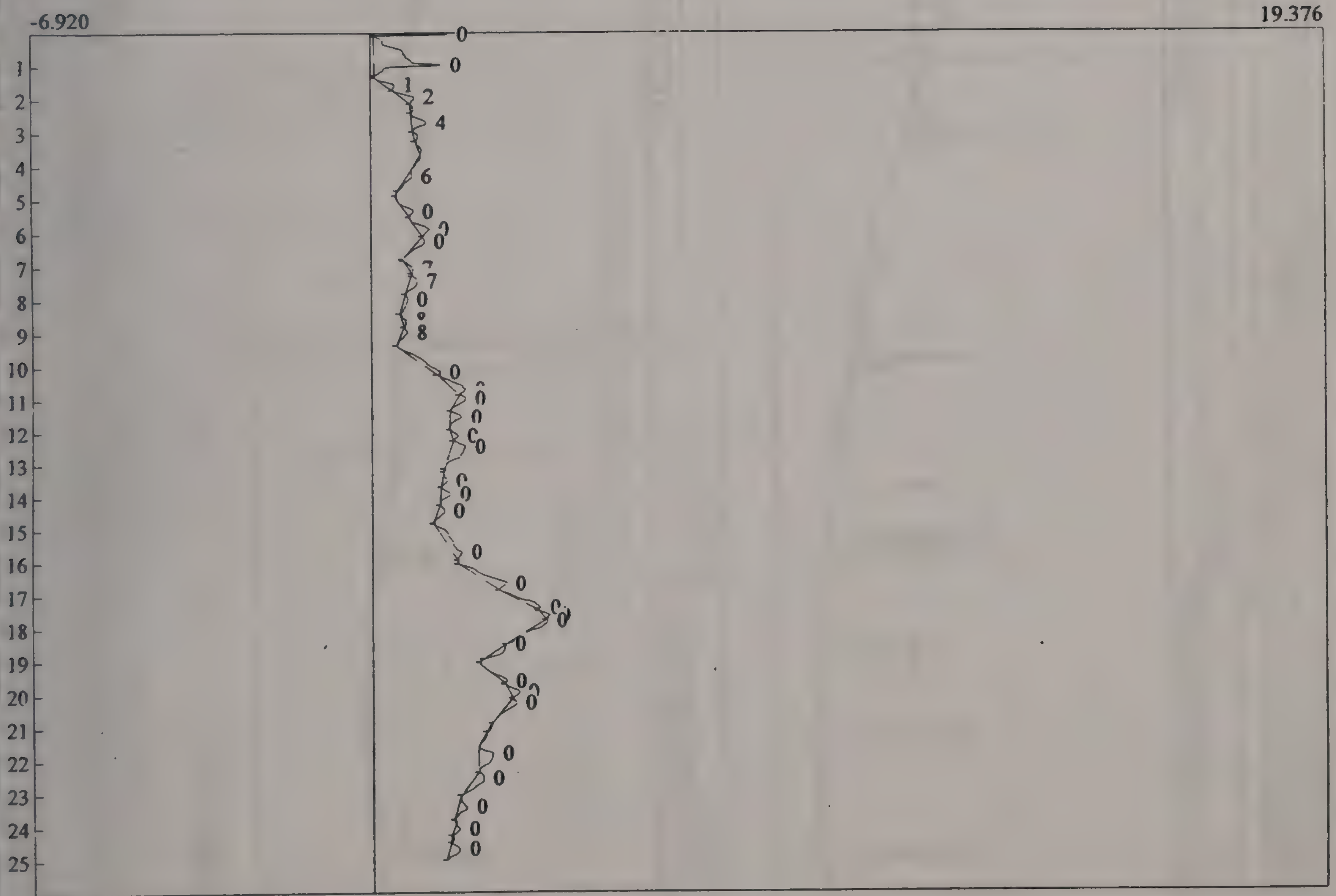


Numbei	Retention	Component	Area	External	Units
11	12.766	(1_2_4)-TMB	9.3770	0.1202	ppmv
1			9.3770	0.1202	

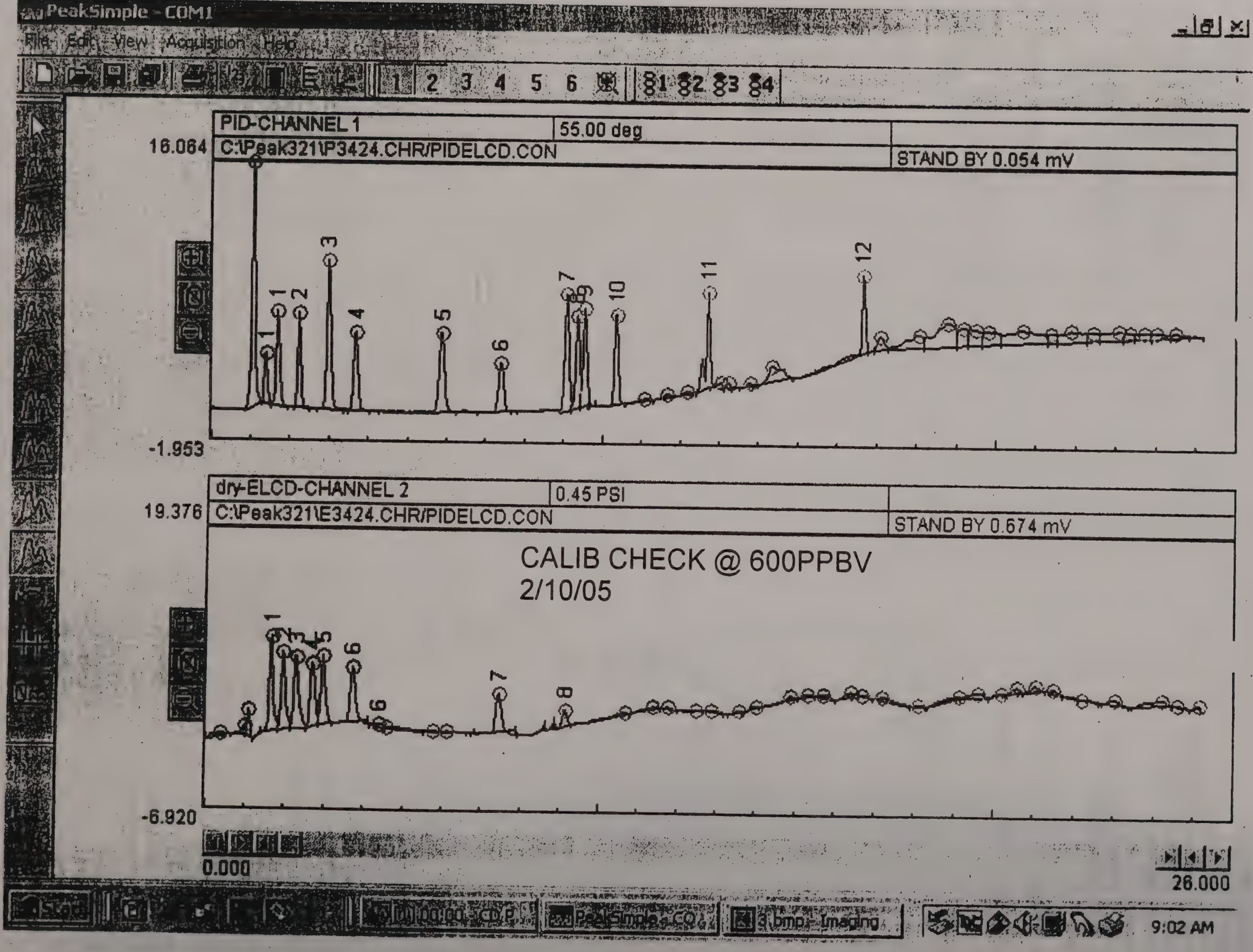
Lab name: NERO LAB
Collected: 2/9/05
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3425.CHR ()
Sample: EQUIP BLANK
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



Number	Retention	Component	Area	External	Units
1	1.550	MECL2	2.1370	0.2800	ppmv
2	1.916	(1_1)-DCA	3.1320	0.2400	ppmv
4	2.700	(1_1_1)-TCA	4.4680	0.1800	ppmv
6	4.300	TCE	2.0150	0.1800	ppmv
7	7.066	PCE	1.1380	0.0451	ppmv
7	7.450	PCE	3.5360	0.1400	ppmv
8	8.616	chlorobenzene	1.0500	0.0483	ppmv
8	9.000	chlorobenzene	1.8070	0.0831	ppmv
8			19.2830	1.1965	



PID-CHANNEL 1 | 55.00 deg
C:\Peak321\P3424.CHR/PIDELCD.CON | STAND BY 0.054 mV

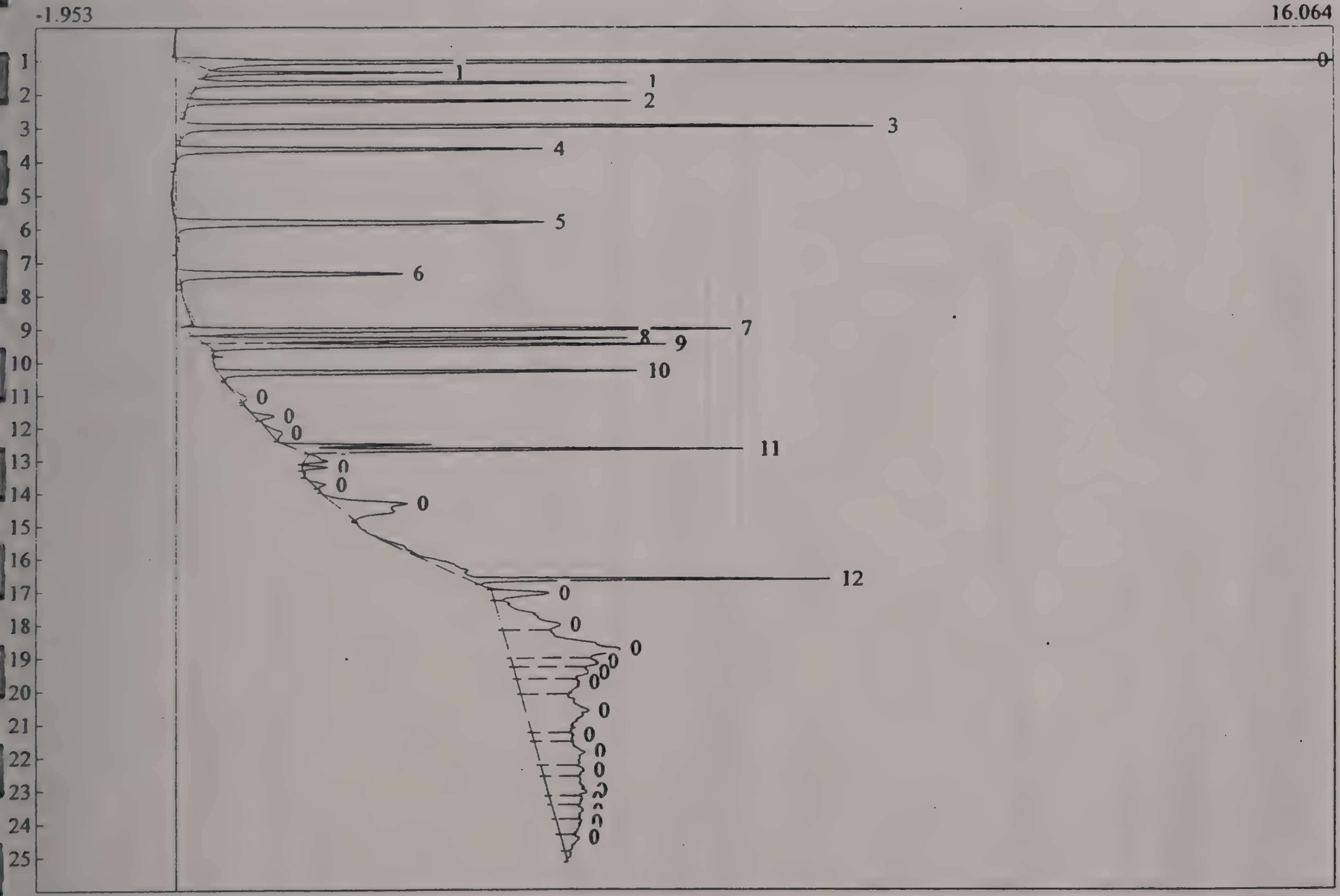
dry-ELCD-CHANNEL 2 | 0.45 PSI
C:\Peak321\E3424.CHR/PIDELCD.CON | STAND BY 0.674 mV

CALIB CHECK @ 600PPBV
2/10/05

Lab name: NERO LAB
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3424.CHR ()
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

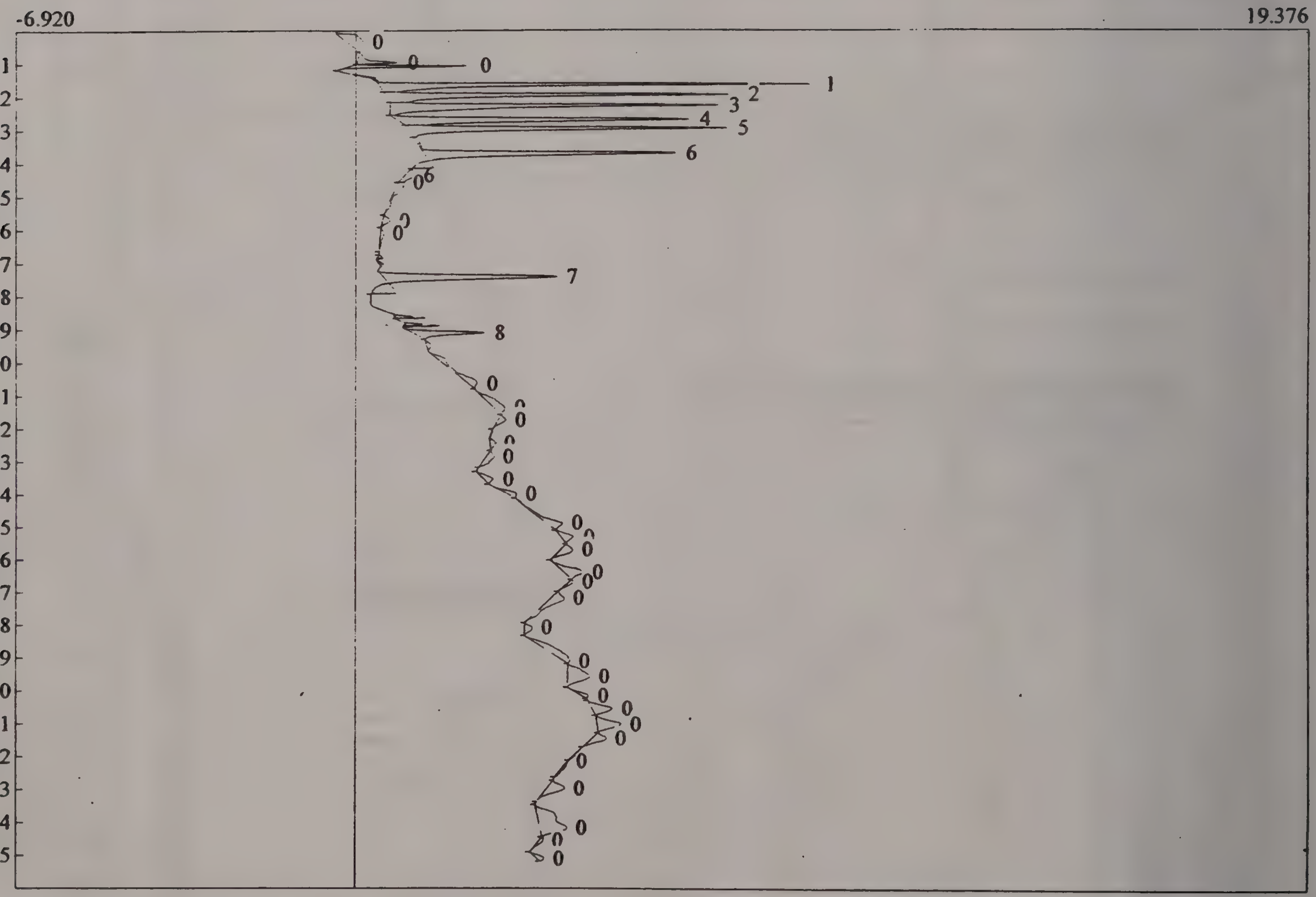


Number	Retention	Component	Area	External	Units
1	1.350	MTBE	12.2880	0.2733	ppmv
1	1.650	MTBE	30.8140	0.6853	ppmv
2	2.200	cis(1_2)-DCE	27.2800	0.5998	ppmv
3	2.950	benzene	56.6700	0.7335	ppmv
4	3.633	TCE	32.3510	0.4307	ppmv
5	5.833	toluene	43.2960	0.6144	ppmv
6	7.350	PCE	26.1760	0.3890	ppmv
7	9.033	chlorobenzene	49.4480	0.5418	ppmv
8	9.316	ethylbenzene	37.1590	0.6427	ppmv
9	9.500	p-xylene	37.8245	0.5676	ppmv
10	10.316	o-xylene	33.5140	0.5618	ppmv
11	12.683	(1_2_4)-TMB	37.0040	0.4742	ppmv
12	16.633	naphthalene	31.6900	0.6063	ppmv

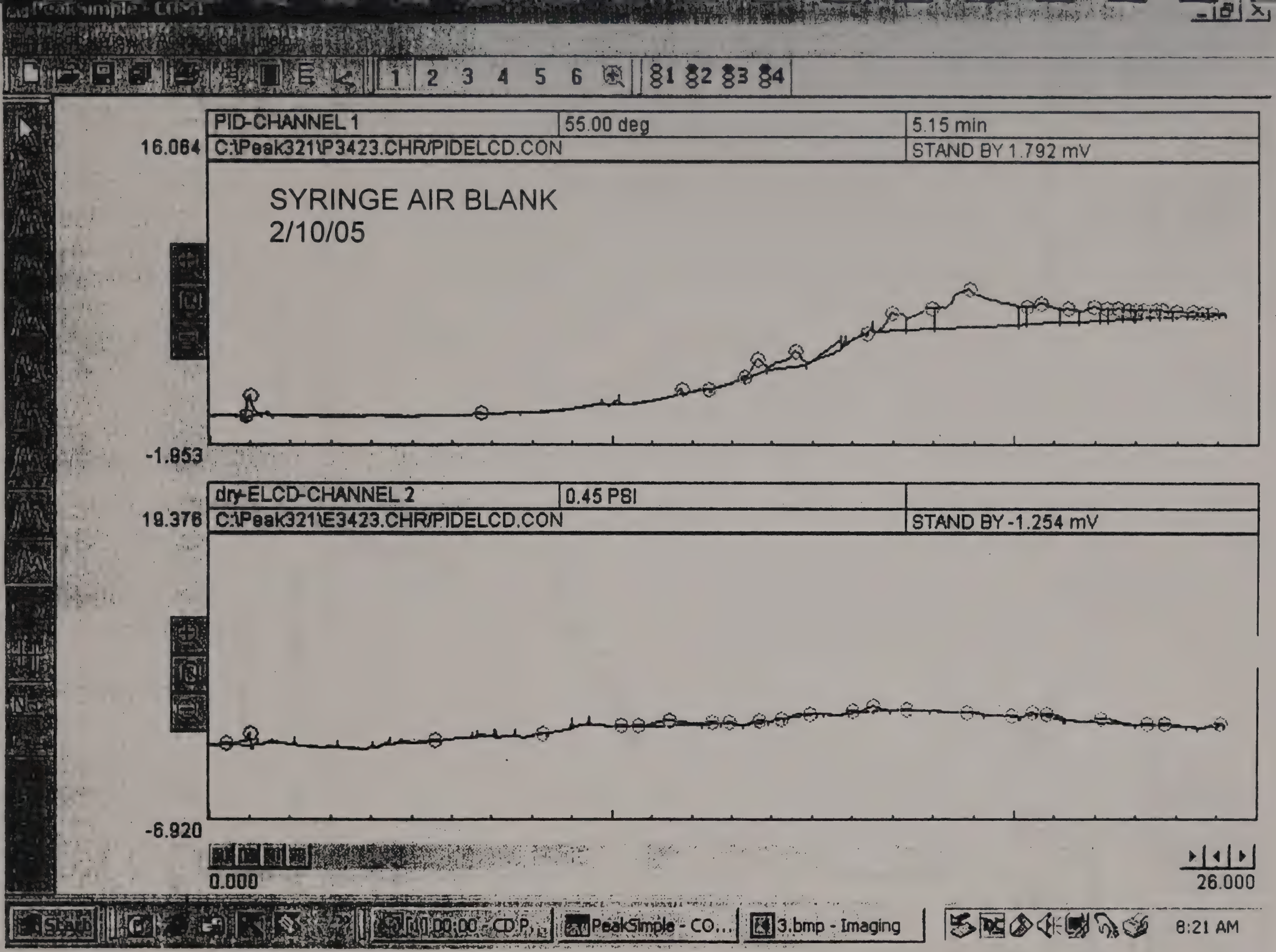
Lab name: NERO LAB
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3424.CHR ()
Operator: 1

Pressure program:

Init temp Hold Ramp Final temp



Number	Retention	Component	Area	External	Units
1	1.616	MECL2	46.7860	0.8054	ppmv
2	1.916	(1_1)-DCA	44.6950	0.6594	ppmv
3	2.250	cis(1_2)-DCE	47.8430	0.6109	ppmv
4	2.666	(1_1_1)-TCA	44.4490	0.4539	ppmv
5	2.933	(1_2)-DCA	43.2970	0.5847	ppmv
6	3.683	TCE	35.9155	0.5584	ppmv
6	4.333	TCE	3.2595	0.1952	ppmv
7	7.400	PCE	25.2230	0.4291	ppmv
8	9.100	chlorobenzene	10.8370	0.5125	ppmv
9			302.3050	4.8096	



PID-CHANNEL 1 | 55.00 deg | 5.15 min

C:\Peak321\P3423.CHR/PIDELCD.CON | STAND BY 1.792 mV

SYRINGE AIR BLANK
2/10/05

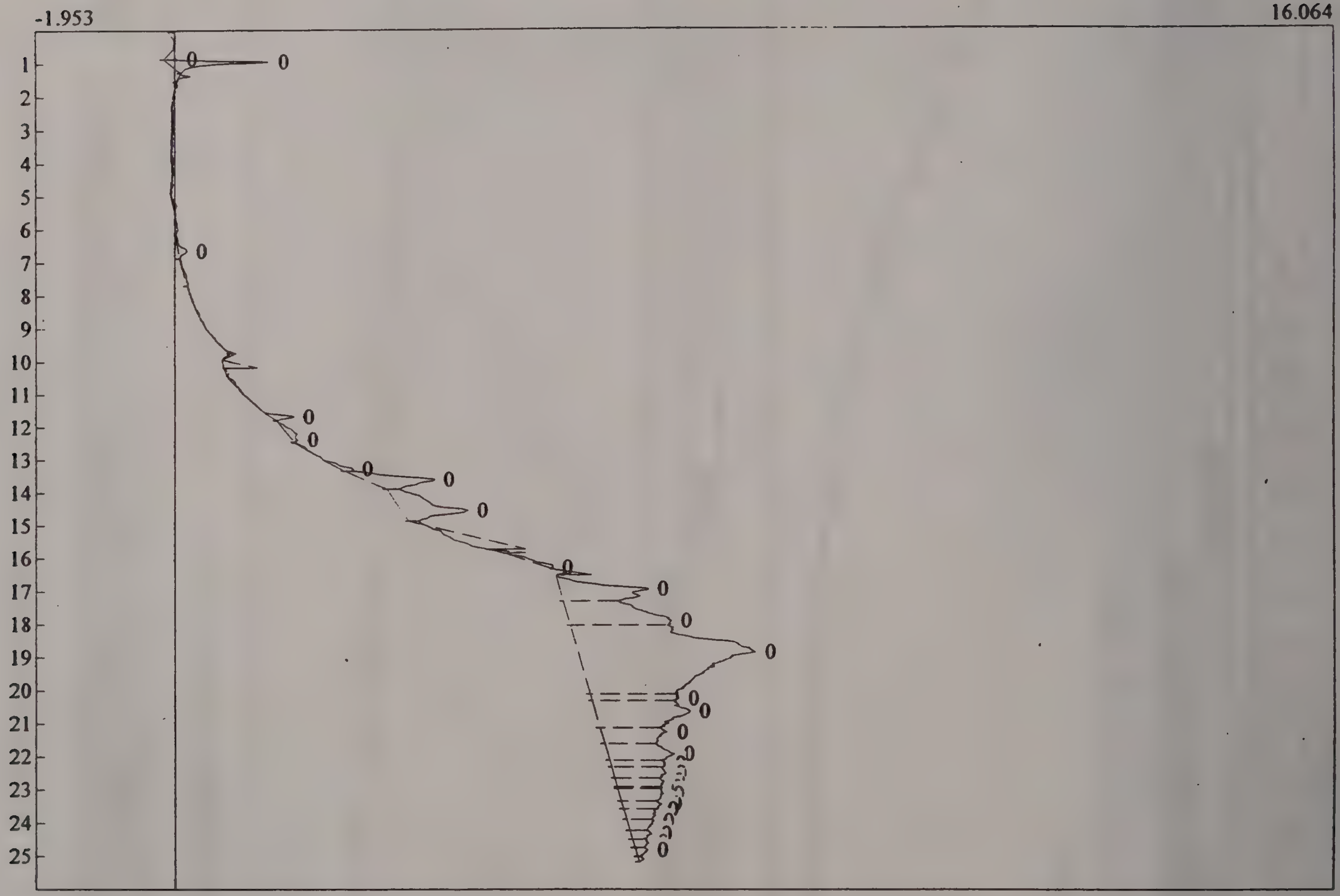
dry-ELCD-CHANNEL 2 | 0.45 PSI

C:\Peak321\E3423.CHR/PIDELCD.CON | STAND BY -1.254 mV

Lab name: NERO LAB
Method: Syringe Injection
Description: PID-CHANNEL 1
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog: PIDELCD.TEM
Data file: C:\Peak321\P3423.CHR ()
Operator: 1

Temperature program:

Init temp	Hold	Ramp	Final temp
55.00	5.000	10.000	160.00
160.00	12.000	0.000	160.00

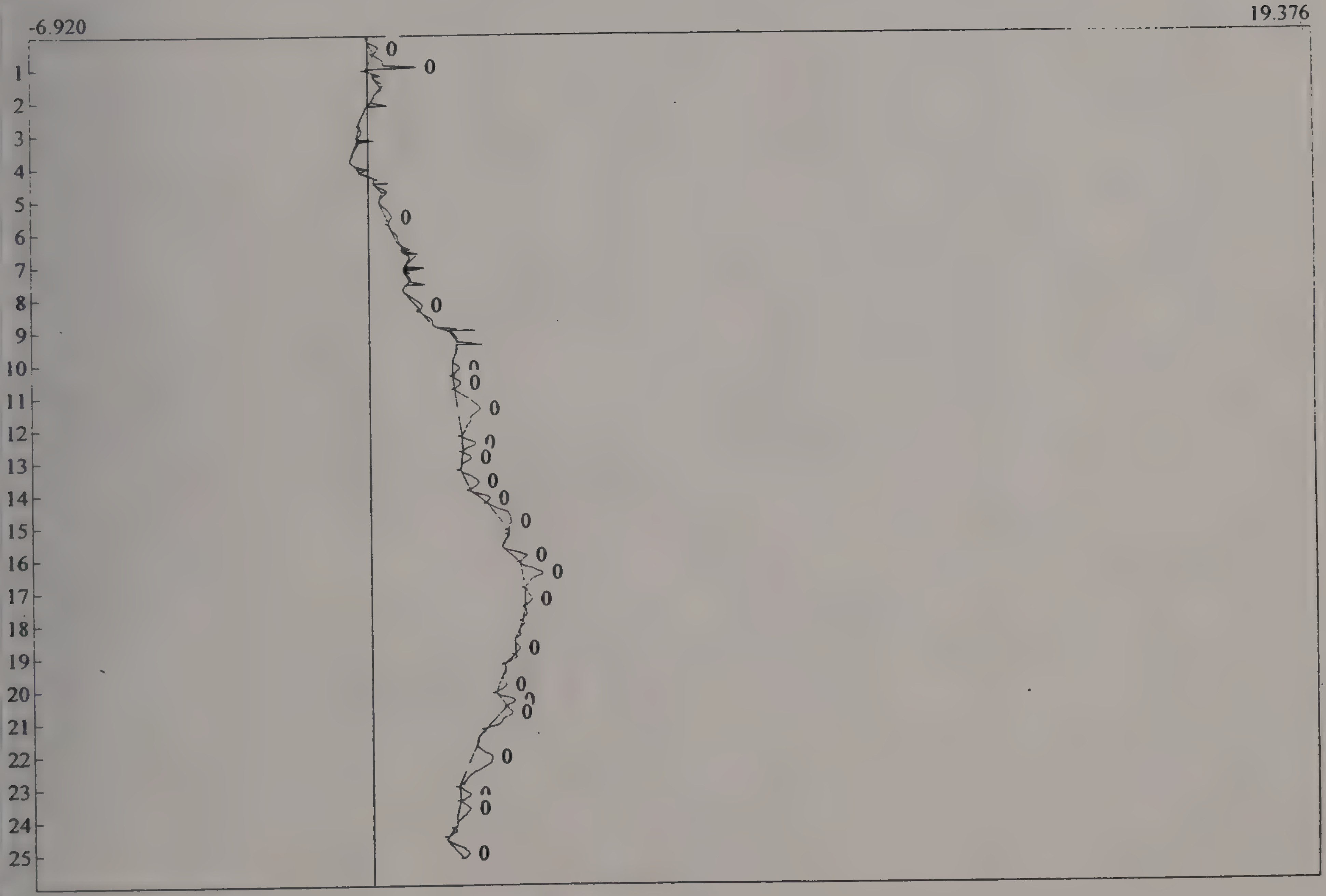


Number	Retention	Component	Area	External	Units
0			0.0000	0.0000	

Lab name: NERO LAB
Method: Syringe Injection
Description: dry-ELCD-CHANNEL 2
Column: RESTEK 30 METER
Carrier: HELIUM AT 5 PSI
Temp. prog:
Data file: C:\Peak321\E3423.CHR ()
Operator: 1

Pressure program:

Init temp	Hold	Ramp	Final temp



NumberRetention	Component	Area	External	Units
0		0.0000	0.0000	

NERO LAB QC RECOVERY
Prepared by: Larry Immerman

LAB I.D.: P3424 / E3424
DATE: 02-10-05
QUALITY CONTROL SAMPLE AT APPROX. 600 ppbv

GC Conc. = ppmv concentration from gas chromatograph
Calc. STD. = Actual concentration of compound in the standard, prepared at WES
%R = Calculated recovery of compound, defined as: GC Conc./ Calc. STD. x 100 = %R

NOTE: NERO LAB uses a deviation of +/-30% from the actual standard concentration.
If a compound falls out of this window, the %R value will be flagged.

Channel 1 (PID) Compound	**Absolute RT**	**RT WINDOW**		**GC Conc.**		**Calc. STD.**		**%R**	
methyl(t)butylether	1.65	1.41	1.71	0.69		0.683		100	
cis(1,2)-dichloroethene	2.20	1.78	2.38	0.60		0.620		97	
benzene	2.95	2.33	3.26	0.73		0.769		95	
trichloroethene	3.63	2.80	4.08	0.43		0.457		94	
toluene	5.83	4.47	6.59	0.61		0.653		94	
tetrachloroethene	7.35	5.96	8.17	0.39		0.362		107	
chlorobenzene	9.03	8.03	9.64	0.54		0.534		101	
ethylbenzene	9.32	8.37	9.90	0.64		0.567		113	
p-xylene	9.50	8.59	10.07	0.57		0.567		100	
o-xylene	10.32	9.58	10.77	0.56		0.567		99	
(1,2,4)-trimethylbenzene	12.68	12.34	13.06	0.47		0.488		96	
naphthalene	16.63	16.56	17.05	0.61		0.470		129	

Channel 2 (dry-ELCD) Compound	**Absolute RT**	**RT WINDOW**		**GC Conc.**		**Calc. STD.**		**%R**	
methylene chloride	1.62	1.44	1.63	0.81		0.708		114	
(1,1)-dichloroethane	1.92	1.70	1.97	0.66		0.607		109	
cis(1,2)-dichloroethene	2.25	2.07	2.39	0.61		0.620		98	
(1,1,1)-trichloroethane	2.67	2.31	2.76	0.45		0.450		100	
(1,2)-dichloroethane	2.93	2.52	3.04	0.58		0.608		95	
trichloroethene	3.68	3.13	3.86	0.56		0.457		122	
tetrachloroethene	7.40	6.52	7.73	0.43		0.360		119	
chlorobenzene	9.10	8.46	9.32	0.51		0.534		96	

ACCEPTANCE *REVIEWER*: CHECK THE ITEMS IN THIS BOX ALONG WITH ANY COMMENTS

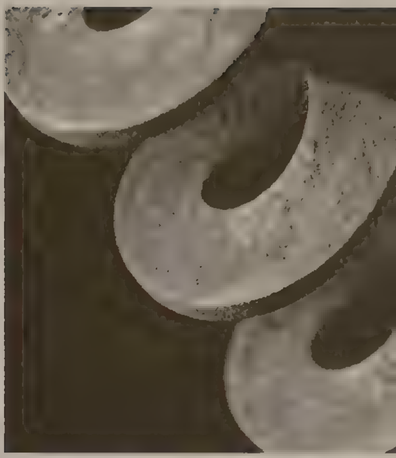
☑ YES ☐ NO PID RT's Within Window
☑ YES ☐ NO PID % Recovery Within Acceptable Deviation.
☑ YES ☐ NO ELCD RT's Within Window
☑ YES ☐ NO ELCD % Recovery Within Acceptable Deviation.

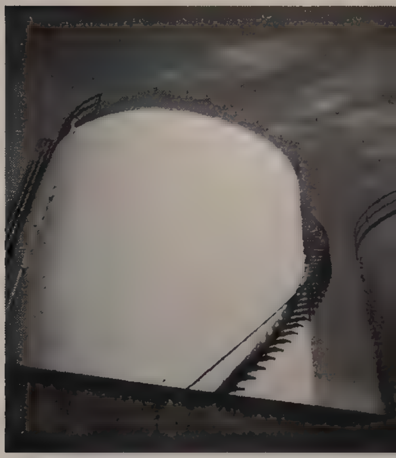
PLACE COMMENTS HERE

1. ~~Used single line (ax+b) calibration method option~~

GEI Consultants

Geotechnical
Environmental and
Water Resources
Engineering





Appendix I

Soil and Groundwater Laboratory Data Reports

RECEIVED JUL [illegible]

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Sanborn, Head & Associates, Inc.

Address: 239 Littleton Road
Suite 1C
Westford, MA 01886

Attn: Mr. Duncan Wood

Project Number: 2170

Site: 2170

Laboratory Job Number: L0206229

Invoice Number: 65322

Date Received: 26-JUN-02

Date Reported: 03-JUL-02

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0206229-01	SH1 S4	SOMERVILLE,MA
L0206229-02	SH2 S2A	SOMERVILLE,MA
L0206229-03	SH3 S1D	SOMERVILLE,MA
L0206229-04	SH4 S3	SOMERVILLE,MA
L0206229-05	SH5 S2	SOMERVILLE,MA
L0206229-06	SHB1 S3	SOMERVILLE,MA
L0206229-07	TRIP BLANK	SOMERVILLE,MA

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by:James R. Roth, PhD

James R. Roth, PhD - Technical Director
This document electronically signed

Alpha Report L0206229:

Volatile Organics

The analysis of Volatile Organics by EPA Method 5035/8260B Low-Level could not be performed on Alpha Sample(s) L0206229-01 through -07 due to the high concentrations of target and/or non-target compounds present in the samples.

One or more of the matrix spike duplicate percent recoveries for 8260 analysis associated with Alpha Sample(s) L0206229-04, -06, and -07 are below the acceptance criteria for the method. The relative percent difference is above the acceptance criteria for the method. The laboratory control sample recoveries and the matrix spike percent recoveries were within limits, no further action was taken.

Alpha Sample(s) L0206229-01 through -03 were re-analyzed on dilution in order to quantitate the sample within the range of the calibration. The results are reported as greater than values for any compound that exceeded the calibration on the initial analysis. The re-analyses were performed only for those compounds which exceeded the range of the calibration.

VPH

Alpha Sample(s) L0206229-01 through -03 have elevated limits of detection due to the dilutions required by the elevated concentrations of target compounds in the samples.

EPH

Surrogate percent recoveries could not be reported for Alpha Sample(s) L0206229-02 due to the high dilution required to quantitate the sample.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206229-01
SH1 S4
Sample Matrix: SOIL

Condition of Sample: Satisfactory

Date Collected: 21-JUN-2002 09:45
Date Received : 26-JUN-2002
Date Reported : 03-JUL-2002

Field Prep: None

Number & Type of Containers: 1-Amber,1-Plastic,4-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total	92.	%	0.10	30	2540G		0626 15:10	DP
Volatile Organics 8260 via High 5035				1	8260B		0628 21:11	AR
Methylene chloride	ND	ug/kg	5500					
1,1-Dichloroethane	ND	ug/kg	820					
Chloroform	ND	ug/kg	820					
Carbon tetrachloride	ND	ug/kg	550					
1,2-Dichloropropane	ND	ug/kg	1900					
Dibromochloromethane	ND	ug/kg	550					
.1,2-Trichloroethane	ND	ug/kg	820					
trachloroethene	>110000	ug/kg	550					
Chlorobenzene	ND	ug/kg	550					
Trichlorofluoromethane	ND	ug/kg	2700					
1,2-Dichloroethane	ND	ug/kg	550					
1,1,1-Trichloroethane	ND	ug/kg	550					
Bromodichloromethane	ND	ug/kg	550					
trans-1,3-Dichloropropene	ND	ug/kg	550					
cis-1,3-Dichloropropene	ND	ug/kg	550					
1,1-Dichloropropene	ND	ug/kg	2700					
Bromoform	ND	ug/kg	550					
1,1,2,2-Tetrachloroethane	ND	ug/kg	550					
Benzene	ND	ug/kg	550					
Toluene	ND	ug/kg	820					
Ethylbenzene	ND	ug/kg	550					
Chloromethane	ND	ug/kg	2700					
Bromomethane	ND	ug/kg	1100					
Vinyl chloride	ND	ug/kg	1100					
Chloroethane	ND	ug/kg	1100					
1,1-Dichloroethene	ND	ug/kg	550					
trans-1,2-Dichloroethene	ND	ug/kg	820					
Trichloroethene	ND	ug/kg	550					
1,2-Dichlorobenzene	ND	ug/kg	2700					
1,3-Dichlorobenzene	ND	ug/kg	2700					
1,4-Dichlorobenzene	ND	ug/kg	2700					
Methyl tert butyl ether	ND	ug/kg	1100					
p/m-Xylene	ND	ug/kg	550					
o-Xylene	ND	ug/kg	550					
is-1,2-Dichloroethene	ND	ug/kg	550					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-01
SH1 S4

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics 8260 via High 5035 continued				1	8260B		0628 21:11	AR
Dibromomethane	ND	ug/kg	5500					
1,4-Dichlorobutane	ND	ug/kg	5500					
Iodomethane	ND	ug/kg	5500					
1,2,3-Trichloropropane	ND	ug/kg	5500					
Styrene	ND	ug/kg	550					
Dichlorodifluoromethane	ND	ug/kg	5500					
Acetone	ND	ug/kg	5500					
Carbon disulfide	ND	ug/kg	5500					
2-Butanone	ND	ug/kg	5500					
Vinyl acetate	ND	ug/kg	5500					
4-Methyl-2-pentanone	ND	ug/kg	5500					
2-Hexanone	ND	ug/kg	5500					
Ethyl methacrylate	ND	ug/kg	5500					
Acrolein	ND	ug/kg	14000					
Acrylonitrile	ND	ug/kg	5500					
Bromochloromethane	ND	ug/kg	2700					
Tetrahydrofuran	ND	ug/kg	11000					
2,2-Dichloropropane	ND	ug/kg	2700					
1,2-Dibromoethane	ND	ug/kg	2700					
1,3-Dichloropropane	ND	ug/kg	2700					
1,1,1,2-Tetrachloroethane	ND	ug/kg	550					
Bromobenzene	ND	ug/kg	2700					
n-Butylbenzene	ND	ug/kg	550					
sec-Butylbenzene	ND	ug/kg	550					
tert-Butylbenzene	ND	ug/kg	2700					
o-Chlorotoluene	ND	ug/kg	2700					
p-Chlorotoluene	ND	ug/kg	2700					
1,2-Dibromo-3-chloropropane	ND	ug/kg	2700					
Hexachlorobutadiene	ND	ug/kg	2700					
Isopropylbenzene	ND	ug/kg	550					
p-Isopropyltoluene	ND	ug/kg	550					
Naphthalene	ND	ug/kg	2700					
n-Propylbenzene	ND	ug/kg	550					
1,2,3-Trichlorobenzene	ND	ug/kg	2700					
1,2,4-Trichlorobenzene	ND	ug/kg	2700					
1,3,5-Trimethylbenzene	ND	ug/kg	2700					
1,2,4-Trimethylbenzene	ND	ug/kg	2700					
trans-1,4-Dichloro-2-butene	ND	ug/kg	2700					
Ethyl ether	ND	ug/kg	2700					
Surrogate Recovery								
1,2-Dichloroethane-d4	80.0	%						
Toluene-d8	99.0	%						
4-Bromofluorobenzene	96.0	%						
Dibromofluoromethane	90.0	%						
Volatile Organics 8260 via High 5035				1	8260B		0701 19:01	AR
Tetrachloroethene	1500000	ug/kg	11000					

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0206229-01
SH1 S4

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1	8260B		0701 19:01	AR
Surrogate Recovery								
1,2-Dichloroethane-d4	95.0	%						
Toluene-d8	93.0	%						
4-Bromofluorobenzene	93.0	%						
Dibromofluoromethane	97.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-01
SH1 S4

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Petroleum Hydrocarbons				47 98-1		0628 20:54	MM

Quality Control Information

Condition of sample received:	Satisfactory
Sample temperature upon receipt:	Received on Ice
Were samples received in methanol?	Yes (Covering the Soil)
Methanol ratio:	1:1 +/- 25%
Were all QA/QC procedures REQUIRED by the method followed?	YES
Were all performance/acceptance standards for the required procedures achieved?	YES
Were significant modifications made to the method as specified in Sect 11.3?	NO

Please note to subtract the method blank from the stated result.
VPH Standard analysis reports only range data with no adjustments.
The normal acceptance range for the surrogate, 2,5-Dibromotoluene, is 70-130%.

PARAMETER	RESULT	UNITS	RDL
C5-C8 Aliphatics, Unadjusted	300.	mg/kg	25.9
C9-C12 Aliphatics, Unadjusted	ND	mg/kg	25.9
C9-C10 Aromatics, Unadjusted	ND	mg/kg	25.9

Surrogate Recovery

PARAMETER	RESULT	UNITS
2,5-Dibromotoluene-PID	84.0	%
2,5-Dibromotoluene-FID	88.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-01
SH1 S4

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Extractable Petroleum Hydrocarbons				46 98-1	0626 09:50	0628 18:53	PD

Quality Control Information

Condition of sample received:	Satisfactory	
Sample temperature upon receipt:	Received on Ice	
Sample extraction method:	Extracted Per the Method	
Were all QA/QC procedures REQUIRED by the method followed?		YES
Were all performance/acceptance standards for the required procedures achieved?		YES
Were significant modifications made to the method as specified in Sect 11.3?		NO

Please note to subtract the method blank from the stated result.
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

PARAMETER	RESULT	UNITS	RDL
C9-C18 Aliphatics, Unadjusted	ND	mg/kg	10.9
C19-C36 Aliphatics, Unadjusted	ND	mg/kg	10.9
C11-C22 Aromatics, Unadjusted	ND	mg/kg	10.9
Surrogate Recovery			
Chloro-Octadecane	68.0	%	
o-Terphenyl	91.0	%	
2-Fluorobiphenyl	97.0	%	
2-Bromonaphthalene	80.0	%	

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L0206229-02 SH2 S2A	**Date Collected:**	21-JUN-2002 10:45
Sample Matrix:	SOIL	**Date Received :**	26-JUN-2002
		Date Reported :	03-JUL-2002
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 1-Amber,1-Plastic,4-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Solids, Total	88.	%	0.10	30	2540G		0626 15:10	DP
Volatile Organics 8260 via High 5035				1	8260B		0628 21:51	AR
Methylene chloride	ND	ug/kg	7700					
1,1-Dichloroethane	ND	ug/kg	1200					
Chloroform	ND	ug/kg	1200					
Carbon tetrachloride	ND	ug/kg	770					
1,2-Dichloropropane	ND	ug/kg	2700					
Dibromochloromethane	ND	ug/kg	770					
1,1,2-Trichloroethane	ND	ug/kg	1200					
Tetrachloroethene	>160000	ug/kg	770					
Chlorobenzene	ND	ug/kg	770					
Trichlorofluoromethane	ND	ug/kg	3900					
1,2-Dichloroethane	ND	ug/kg	770					
1,1,1-Trichloroethane	ND	ug/kg	770					
Bromodichloromethane	ND	ug/kg	770					
trans-1,3-Dichloropropene	ND	ug/kg	770					
cis-1,3-Dichloropropene	ND	ug/kg	770					
1,1-Dichloropropene	ND	ug/kg	3900					
Bromoform	ND	ug/kg	770					
1,1,2,2-Tetrachloroethane	ND	ug/kg	770					
Benzene	ND	ug/kg	770					
Toluene	ND	ug/kg	1200					
Ethylbenzene	ND	ug/kg	770					
Chloromethane	ND	ug/kg	3900					
Bromomethane	ND	ug/kg	1500					
Vinyl chloride	ND	ug/kg	1500					
Chloroethane	ND	ug/kg	1500					
1,1-Dichloroethene	ND	ug/kg	770					
trans-1,2-Dichloroethene	ND	ug/kg	1200					
Trichloroethene	2000	ug/kg	770					
1,2-Dichlorobenzene	ND	ug/kg	3900					
1,3-Dichlorobenzene	ND	ug/kg	3900					
1,4-Dichlorobenzene	ND	ug/kg	3900					
Methyl tert butyl ether	ND	ug/kg	1500					
p/m-Xylene	ND	ug/kg	770					
o-Xylene	ND	ug/kg	770					
cis-1,2-Dichloroethene	ND	ug/kg	770					

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0206229-02
SH2 S2A

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1	8260B		0628 21:51	AR
Dibromomethane	ND	ug/kg	7700					
1,4-Dichlorobutane	ND	ug/kg	7700					
Iodomethane	ND	ug/kg	7700					
1,2,3-Trichloropropane	ND	ug/kg	7700					
Styrene	ND	ug/kg	770					
Dichlorodifluoromethane	ND	ug/kg	7700					
Acetone	ND	ug/kg	7700					
Carbon disulfide	ND	ug/kg	7700					
2-Butanone	ND	ug/kg	7700					
Vinyl acetate	ND	ug/kg	7700					
4-Methyl-2-pentanone	ND	ug/kg	7700					
2-Hexanone	ND	ug/kg	7700					
Ethyl methacrylate	ND	ug/kg	7700					
Acrolein	ND	ug/kg	19000					
Acrylonitrile	ND	ug/kg	7700					
Bromochloromethane	ND	ug/kg	3900					
Tetrahydrofuran	ND	ug/kg	15000					
2,2-Dichloropropane	ND	ug/kg	3900					
1,2-Dibromoethane	ND	ug/kg	3900					
1,3-Dichloropropane	ND	ug/kg	3900					
1,1,1,2-Tetrachloroethane	ND	ug/kg	770					
Bromobenzene	ND	ug/kg	3900					
n-Butylbenzene	ND	ug/kg	770					
sec-Butylbenzene	ND	ug/kg	770					
tert-Butylbenzene	ND	ug/kg	3900					
o-Chlorotoluene	ND	ug/kg	3900					
p-Chlorotoluene	ND	ug/kg	3900					
1,2-Dibromo-3-chloropropane	ND	ug/kg	3900					
Hexachlorobutadiene	ND	ug/kg	3900					
Isopropylbenzene	ND	ug/kg	770					
p-Isopropyltoluene	ND	ug/kg	770					
Naphthalene	ND	ug/kg	3900					
n-Propylbenzene	ND	ug/kg	770					
1,2,3-Trichlorobenzene	ND	ug/kg	3900					
1,2,4-Trichlorobenzene	ND	ug/kg	3900					
1,3,5-Trimethylbenzene	ND	ug/kg	3900					
1,2,4-Trimethylbenzene	ND	ug/kg	3900					
trans-1,4-Dichloro-2-butene	ND	ug/kg	3900					
Ethyl ether	ND	ug/kg	3900					
Surrogate Recovery								
1,2-Dichloroethane-d4	80.0	%						
Toluene-d8	99.0	%						
4-Bromofluorobenzene	98.0	%						
Dibromofluoromethane	94.0	%						
Volatile Organics 8260 via High 5035				1	8260B		0701 19:37	AR
Tetrachloroethene	1800000	ug/kg	15000					

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0206229-02
SH2 S2A

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	 ANAL	ID
Volatile Organics 8260 via High 5035 continued				1 8260B		0701 19:37	AR
Surrogate Recovery							
1,2-Dichloroethane-d4	96.0	%					
Toluene-d8	93.0	%					
4-Bromofluorobenzene	97.0	%					
Dibromofluoromethane	100.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

boratory Sample Number: L0206229-02
SH2 S2A

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Petroleum Hydrocarbons				47 98-1		0628 22:35	MM

Quality Control Information

Condition of sample received:	Satisfactory	
Sample temperature upon receipt:	Received on Ice	
Were samples received in methanol?	Yes (Covering the Soil)	
Methanol ratio:	1:1 +/- 25%	
Were all QA/QC procedures REQUIRED by the method followed?		YES
Were all performance/acceptance standards for the required procedures achieved?		YES
Were significant modifications made to the method as specified in Sect 11.3?		NO

Please note to subtract the method blank from the stated result.
VPH Standard analysis reports only range data with no adjustments.
The normal acceptance range for the surrogate, 2,5-Dibromotoluene, is 70-130%.

PARAMETER	RESULT	UNITS	RDL
C5-C8 Aliphatics, Unadjusted	833.	mg/kg	29.9
C9-C12 Aliphatics, Unadjusted	ND	mg/kg	29.9
C9-C10 Aromatics, Unadjusted	ND	mg/kg	29.9
Surrogate Recovery			
5-Dibromotoluene-PID	86.0	%	
5-Dibromotoluene-FID	85.0	%	

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-02
SH2 S2A

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Extractable Petroleum Hydrocarbons				46 98-1	0626 09:50	0628 19:39	PD

Quality Control Information

Condition of sample received:	Satisfactory
Sample temperature upon receipt:	Received on Ice
Sample extraction method:	Extracted Per the Method

Were all QA/QC procedures REQUIRED by the method followed? YES

Were all performance/acceptance standards for the required procedures achieved? NO

1. One or more of the extraction surrogate recoveries were less than 40%.

Were significant modifications made to the method as specified in Sect 11.3? NO

Please note to subtract the method blank from the stated result.

The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.

The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

PARAMETER	RESULT	UNITS	RDL
C9-C18 Aliphatics, Unadjusted	ND	mg/kg	68.2
C19-C36 Aliphatics, Unadjusted	144.	mg/kg	68.2
C11-C22 Aromatics, Unadjusted	916.	mg/kg	68.2

Surrogate Recovery

Chloro-Octadecane	ND	%
o-Terphenyl	ND	%
2-Fluorobiphenyl	90.0	%
2-Bromonaphthalene	82.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L0206229-03 SH3 S1D	**Date Collected:**	21-JUN-2002 11:45
		Date Received :	26-JUN-2002
Sample Matrix:	SOIL	**Date Reported :**	03-JUL-2002
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 1-Amber,1-Plastic,4-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total	89.	%	0.10	30	2540G		0626 15:10	DP
Volatile Organics 8260 via High 5035				1	8260B		0628 22:30	AR
Methylene chloride	ND	ug/kg	6400					
1,1-Dichloroethane	ND	ug/kg	960					
Chloroform	ND	ug/kg	960					
Carbon tetrachloride	ND	ug/kg	640					
1,2-Dichloropropane	ND	ug/kg	2200					
Dibromochloromethane	ND	ug/kg	640					
1,2-Trichloroethane	ND	ug/kg	960					
trachloroethene	>28000	ug/kg	640					
Chlorobenzene	ND	ug/kg	640					
Trichlorofluoromethane	ND	ug/kg	3200					
1,2-Dichloroethane	ND	ug/kg	640					
1,1,1-Trichloroethane	ND	ug/kg	640					
Bromodichloromethane	ND	ug/kg	640					
trans-1,3-Dichloropropene	ND	ug/kg	640					
cis-1,3-Dichloropropene	ND	ug/kg	640					
1,1-Dichloropropene	ND	ug/kg	3200					
Bromoform	ND	ug/kg	640					
1,1,2,2-Tetrachloroethane	ND	ug/kg	640					
Benzene	ND	ug/kg	640					
Toluene	ND	ug/kg	960					
Ethylbenzene	ND	ug/kg	640					
Chloromethane	ND	ug/kg	3200					
Bromomethane	ND	ug/kg	1300					
Vinyl chloride	ND	ug/kg	1300					
Chloroethane	ND	ug/kg	1300					
1,1-Dichloroethene	ND	ug/kg	640					
trans-1,2-Dichloroethene	ND	ug/kg	960					
Trichloroethene	ND	ug/kg	640					
1,2-Dichlorobenzene	ND	ug/kg	3200					
1,3-Dichlorobenzene	ND	ug/kg	3200					
1,4-Dichlorobenzene	ND	ug/kg	3200					
Methyl tert butyl ether	ND	ug/kg	1300					
p/m-Xylene	ND	ug/kg	640					
o-Xylene	ND	ug/kg	640					
is-1,2-Dichloroethene	ND	ug/kg	640					

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0206229-03
SH3 S1D

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1	8260B		0628 22:30	AR
Dibromomethane	ND	ug/kg	6400					
1,4-Dichlorobutane	ND	ug/kg	6400					
Iodomethane	ND	ug/kg	6400					
1,2,3-Trichloropropane	ND	ug/kg	6400					
Styrene	ND	ug/kg	640					
Dichlorodifluoromethane	ND	ug/kg	6400					
Acetone	ND	ug/kg	6400					
Carbon disulfide	ND	ug/kg	6400					
2-Butanone	ND	ug/kg	6400					
Vinyl acetate	ND	ug/kg	6400					
4-Methyl-2-pentanone	ND	ug/kg	6400					
2-Hexanone	ND	ug/kg	6400					
Ethyl methacrylate	ND	ug/kg	6400					
Acrolein	ND	ug/kg	16000					
Acrylonitrile	ND	ug/kg	6400					
Bromochloromethane	ND	ug/kg	3200					
Tetrahydrofuran	ND	ug/kg	13000					
2,2-Dichloropropane	ND	ug/kg	3200					
1,2-Dibromoethane	ND	ug/kg	3200					
1,3-Dichloropropane	ND	ug/kg	3200					
1,1,1,2-Tetrachloroethane	ND	ug/kg	640					
Bromobenzene	ND	ug/kg	3200					
n-Butylbenzene	ND	ug/kg	640					
sec-Butylbenzene	ND	ug/kg	640					
tert-Butylbenzene	ND	ug/kg	3200					
o-Chlorotoluene	ND	ug/kg	3200					
p-Chlorotoluene	ND	ug/kg	3200					
1,2-Dibromo-3-chloropropane	ND	ug/kg	3200					
Hexachlorobutadiene	ND	ug/kg	3200					
Isopropylbenzene	ND	ug/kg	640					
p-Isopropyltoluene	ND	ug/kg	640					
Naphthalene	ND	ug/kg	3200					
n-Propylbenzene	ND	ug/kg	640					
1,2,3-Trichlorobenzene	ND	ug/kg	3200					
1,2,4-Trichlorobenzene	ND	ug/kg	3200					
1,3,5-Trimethylbenzene	ND	ug/kg	3200					
1,2,4-Trimethylbenzene	ND	ug/kg	3200					
trans-1,4-Dichloro-2-butene	ND	ug/kg	3200					
Ethyl ether	ND	ug/kg	3200					
Surrogate Recovery								
1,2-Dichloroethane-d4	80.0	%						
Toluene-d8	99.0	%						
4-Bromofluorobenzene	96.0	%						
Dibromofluoromethane	92.0	%						
Volatile Organics 8260 via High 5035				1	8260B		0702 11:35	AR
Tetrachloroethene	140000	ug/kg	1300					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

boratory Sample Number: L0206229-03
SH3 S1D

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1	8260B	[illegible]	0702 11:35	AR
Surrogate Recovery								
1,2-Dichloroethane-d4	97.0	%						
Toluene-d8	96.0	%						
4-Bromofluorobenzene	98.0	%						
Dibromofluoromethane	100.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-03
SH3 S1D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Petroleum Hydrocarbons				47 98-1		0629 00:15	MM

Quality Control Information

Condition of sample received: Satisfactory
Sample temperature upon receipt: Received on Ice
Were samples received in methanol? Yes (Covering the Soil)
Methanol ratio: 1:1 +/- 25%
Were all QA/QC procedures REQUIRED by the method followed? YES
Were all performance/acceptance standards for the required procedures achieved? YES
Were significant modifications made to the method as specified in Sect 11.3? NO
Please note to subtract the method blank from the stated result.
VPH Standard analysis reports only range data with no adjustments.
The normal acceptance range for the surrogate, 2,5-Dibromotoluene, is 70-130%.

PARAMETER	RESULT	UNITS	RDL
C5-C8 Aliphatics, Unadjusted	43.0	mg/kg	26.8
C9-C12 Aliphatics, Unadjusted	ND	mg/kg	26.8
C9-C10 Aromatics, Unadjusted	ND	mg/kg	26.8

Surrogate Recovery

PARAMETER	RESULT	UNITS
2,5-Dibromotoluene-PID	84.0	%
2,5-Dibromotoluene-FID	88.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

boratory Sample Number: L0206229-03
SH3 S1D

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Extractable Petroleum Hydrocarbons				46 98-1	0626 09:50	0628 20:24	PD

Quality Control Information

Condition of sample received:	Satisfactory	
Sample temperature upon receipt:	Received on Ice	
Sample extraction method:	Extracted Per the Method	
Were all QA/QC procedures REQUIRED by the method followed?		YES
Were all performance/acceptance standards for the required procedures achieved?		YES
Were significant modifications made to the method as specified in Sect 11.3?		NO

Please note to subtract the method blank from the stated result.

The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.

The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

PARAMETER	RESULT	UNITS	RDL
C9-C18 Aliphatics, Unadjusted	ND	mg/kg	11.2
C19-C36 Aliphatics, Unadjusted	ND	mg/kg	11.2
C11-C22 Aromatics, Unadjusted	86.4	mg/kg	11.2
Surrogate Recovery			
hloro-Octadecane	73.0	%	
o-Terphenyl	124.	%	
2-Fluorobiphenyl	90.0	%	
2-Bromonaphthalene	76.0	%	

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206229-04
SH4 S3
Sample Matrix: SOIL

Date Collected: 21-JUN-2002 12:45
Date Received : 26-JUN-2002
Date Reported : 03-JUL-2002

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1-Amber,1-Plastic,4-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Solids, Total	94.	%	0.10	30	2540G		0626 15:10	DP
Volatile Organics 8260 via High 5035				1	8260B		0701 17:50	RY
Methylene chloride	ND	ug/kg	540					
1,1-Dichloroethane	ND	ug/kg	80.					
Chloroform	ND	ug/kg	80.					
Carbon tetrachloride	ND	ug/kg	54.					
1,2-Dichloropropane	ND	ug/kg	190					
Dibromochloromethane	ND	ug/kg	54.					
1,1,2-Trichloroethane	ND	ug/kg	80.					
Tetrachloroethene	4800	ug/kg	54.					
Chlorobenzene	ND	ug/kg	54.					
Trichlorofluoromethane	ND	ug/kg	270					
1,2-Dichloroethane	ND	ug/kg	54.					
1,1,1-Trichloroethane	370	ug/kg	54.					
Bromodichloromethane	ND	ug/kg	54.					
trans-1,3-Dichloropropene	ND	ug/kg	54.					
cis-1,3-Dichloropropene	ND	ug/kg	54.					
1,1-Dichloropropene	ND	ug/kg	270					
Bromoform	ND	ug/kg	54.					
1,1,2,2-Tetrachloroethane	ND	ug/kg	54.					
Benzene	ND	ug/kg	54.					
Toluene	ND	ug/kg	80.					
Ethylbenzene	ND	ug/kg	54.					
Chloromethane	ND	ug/kg	270					
Bromomethane	ND	ug/kg	110					
Vinyl chloride	ND	ug/kg	110					
Chloroethane	ND	ug/kg	110					
1,1-Dichloroethene	ND	ug/kg	54.					
trans-1,2-Dichloroethene	ND	ug/kg	80.					
Trichloroethene	1400	ug/kg	54.					
1,2-Dichlorobenzene	ND	ug/kg	270					
1,3-Dichlorobenzene	ND	ug/kg	270					
1,4-Dichlorobenzene	ND	ug/kg	270					
Methyl tert butyl ether	ND	ug/kg	110					
p/m-Xylene	ND	ug/kg	54.					
o-Xylene	ND	ug/kg	54.					
cis-1,2-Dichloroethene	ND	ug/kg	54.					

Comments: Complete list of References and Glossary of Terms found in Addendum I

boratory Sample Number: L0206229-04
SH4 S3

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics 8260 via High 5035 continued				1	8260B		0701 17:50	RY
Dibromomethane	ND	ug/kg	540					
1,4-Dichlorobutane	ND	ug/kg	540					
Iodomethane	ND	ug/kg	540					
1,2,3-Trichloropropane	ND	ug/kg	540					
Styrene	ND	ug/kg	54.					
Dichlorodifluoromethane	ND	ug/kg	540					
Acetone	ND	ug/kg	540					
Carbon disulfide	ND	ug/kg	540					
2-Butanone	ND	ug/kg	540					
Vinyl acetate	ND	ug/kg	540					
4-Methyl-2-pentanone	ND	ug/kg	540					
2-Hexanone	ND	ug/kg	540					
Ethyl methacrylate	ND	ug/kg	540					
Acrolein	ND	ug/kg	1300					
Acrylonitrile	ND	ug/kg	540					
Bromochloromethane	ND	ug/kg	270					
Tetrahydrofuran	ND	ug/kg	1100					
2,2-Dichloropropane	ND	ug/kg	270					
1,2-Dibromoethane	ND	ug/kg	270					
1,3-Dichloropropane	ND	ug/kg	270					
1,1,2-Tetrachloroethane	ND	ug/kg	54.					
omobenzene	ND	ug/kg	270					
n-Butylbenzene	ND	ug/kg	54.					
sec-Butylbenzene	ND	ug/kg	54.					
tert-Butylbenzene	ND	ug/kg	270					
o-Chlorotoluene	ND	ug/kg	270					
p-Chlorotoluene	ND	ug/kg	270					
1,2-Dibromo-3-chloropropane	ND	ug/kg	270					
Hexachlorobutadiene	ND	ug/kg	270					
Isopropylbenzene	ND	ug/kg	54.					
p-Isopropyltoluene	ND	ug/kg	54.					
Naphthalene	ND	ug/kg	270					
n-Propylbenzene	ND	ug/kg	54.					
1,2,3-Trichlorobenzene	ND	ug/kg	270					
1,2,4-Trichlorobenzene	ND	ug/kg	270					
1,3,5-Trimethylbenzene	ND	ug/kg	270					
1,2,4-Trimethylbenzene	ND	ug/kg	270					
trans-1,4-Dichloro-2-butene	ND	ug/kg	270					
Ethyl ether	ND	ug/kg	270					
Surrogate Recovery								
1,2-Dichloroethane-d4	94.0	%						
Toluene-d8	91.0	%						
4-Bromofluorobenzene	100.	%						
Dibromofluoromethane	94.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-04
SH4 S3

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Petroleum Hydrocarbons				47 98-1		0629 13:15	MM

Quality Control Information

Condition of sample received:	Satisfactory
Sample temperature upon receipt:	Received on Ice
Were samples received in methanol?	Yes (Covering the Soil)
Methanol ratio:	1:1 +/- 25%
Were all QA/QC procedures REQUIRED by the method followed?	YES
Were all performance/acceptance standards for the required procedures achieved?	YES
Were significant modifications made to the method as specified in Sect 11.3?	NO

Please note to subtract the method blank from the stated result.
VPH Standard analysis reports only range data with no adjustments.
The normal acceptance range for the surrogate, 2,5-Dibromotoluene, is 70-130%.

C5-C8 Aliphatics, Unadjusted	ND	mg/kg	1.75
C9-C12 Aliphatics, Unadjusted	ND	mg/kg	1.75
C9-C10 Aromatics, Unadjusted	ND	mg/kg	1.75

Surrogate Recovery

2,5-Dibromotoluene-PID	91.0	%
2,5-Dibromotoluene-FID	94.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

oratory Sample Number: L0206229-04
SH4 S3

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Extractable Petroleum Hydrocarbons				46 98-1	0626 09:50	0628 21:10	PD

Quality Control Information

Condition of sample received: Satisfactory
Sample temperature upon receipt: Received on Ice
Sample extraction method: Extracted Per the Method
Were all QA/QC procedures REQUIRED by the method followed? YES
Were all performance/acceptance standards for the required procedures achieved? YES
Were significant modifications made to the method as specified in Sect 11.3? NO
Please note to subtract the method blank from the stated result.
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

PARAMETER	RESULT	UNITS	RDL
C9-C18 Aliphatics, Unadjusted	ND	mg/kg	10.6
C19-C36 Aliphatics, Unadjusted	ND	mg/kg	10.6
C11-C22 Aromatics, Unadjusted	ND	mg/kg	10.6

Surrogate Recovery

loro-Octadecane	72.0	%
o-Terphenyl	87.0	%
2-Fluorobiphenyl	94.0	%
2-Bromonaphthalene	82.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L0206229-05 SH5 S2	**Date Collected:**	21-JUN-2002 15:00
		Date Received :	26-JUN-2002
Sample Matrix:	SOIL	**Date Reported :**	03-JUL-2002
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 1-Amber,1-Plastic,2-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Solids, Total	78.	%	0.10	30 2540G		0626 15:10	DP
Volatile Organics 8260 via High 5035				1 8260B		0628 23:48	AR
Methylene chloride	ND	ug/kg	6600				
1,1-Dichloroethane	ND	ug/kg	990				
Chloroform	ND	ug/kg	990				
Carbon tetrachloride	ND	ug/kg	660				
1,2-Dichloropropane	ND	ug/kg	2300				
Dibromochloromethane	ND	ug/kg	660				
1,1,2-Trichloroethane	ND	ug/kg	990				
Tetrachloroethene	61000	ug/kg	660				
Chlorobenzene	ND	ug/kg	660				
Trichlorofluoromethane	ND	ug/kg	3300				
1,2-Dichloroethane	ND	ug/kg	660				
1,1,1-Trichloroethane	ND	ug/kg	660				
Bromodichloromethane	ND	ug/kg	660				
trans-1,3-Dichloropropene	ND	ug/kg	660				
cis-1,3-Dichloropropene	ND	ug/kg	660				
1,1-Dichloropropene	ND	ug/kg	3300				
Bromoform	ND	ug/kg	660				
1,1,2,2-Tetrachloroethane	ND	ug/kg	660				
Benzene	ND	ug/kg	660				
Toluene	ND	ug/kg	990				
Ethylbenzene	ND	ug/kg	660				
Chloromethane	ND	ug/kg	3300				
Bromomethane	ND	ug/kg	1300				
Vinyl chloride	ND	ug/kg	1300				
Chloroethane	ND	ug/kg	1300				
1,1-Dichloroethene	ND	ug/kg	660				
trans-1,2-Dichloroethene	ND	ug/kg	990				
Trichloroethene	ND	ug/kg	660				
1,2-Dichlorobenzene	ND	ug/kg	3300				
1,3-Dichlorobenzene	ND	ug/kg	3300				
1,4-Dichlorobenzene	ND	ug/kg	3300				
Methyl tert butyl ether	ND	ug/kg	1300				
p/m-Xylene	ND	ug/kg	660				
o-Xylene	ND	ug/kg	660				
cis-1,2-Dichloroethene	ND	ug/kg	660				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

boratory Sample Number: L0206229-05
SH5 S2

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1	8260B		0628 23:48	AR
Dibromomethane	ND	ug/kg	6600					
1,4-Dichlorobutane	ND	ug/kg	6600					
Iodomethane	ND	ug/kg	6600					
1,2,3-Trichloropropane	ND	ug/kg	6600					
Styrene	ND	ug/kg	660					
Dichlorodifluoromethane	ND	ug/kg	6600					
Acetone	ND	ug/kg	6600					
Carbon disulfide	ND	ug/kg	6600					
2-Butanone	ND	ug/kg	6600					
Vinyl acetate	ND	ug/kg	6600					
4-Methyl-2-pentanone	ND	ug/kg	6600					
2-Hexanone	ND	ug/kg	6600					
Ethyl methacrylate	ND	ug/kg	6600					
Acrolein	ND	ug/kg	16000					
Acrylonitrile	ND	ug/kg	6600					
Bromochloromethane	ND	ug/kg	3300					
Tetrahydrofuran	ND	ug/kg	13000					
2,2-Dichloropropane	ND	ug/kg	3300					
1,2-Dibromoethane	ND	ug/kg	3300					
1,3-Dichloropropane	ND	ug/kg	3300					
1,1,1,2-Tetrachloroethane	ND	ug/kg	660					
omobenzene	ND	ug/kg	3300					
n-Butylbenzene	ND	ug/kg	660					
sec-Butylbenzene	ND	ug/kg	660					
tert-Butylbenzene	ND	ug/kg	3300					
o-Chlorotoluene	ND	ug/kg	3300					
p-Chlorotoluene	ND	ug/kg	3300					
1,2-Dibromo-3-chloropropane	ND	ug/kg	3300					
Hexachlorobutadiene	ND	ug/kg	3300					
Isopropylbenzene	ND	ug/kg	660					
p-Isopropyltoluene	ND	ug/kg	660					
Naphthalene	ND	ug/kg	3300					
n-Propylbenzene	ND	ug/kg	660					
1,2,3-Trichlorobenzene	ND	ug/kg	3300					
1,2,4-Trichlorobenzene	ND	ug/kg	3300					
1,3,5-Trimethylbenzene	ND	ug/kg	3300					
1,2,4-Trimethylbenzene	ND	ug/kg	3300					
trans-1,4-Dichloro-2-butene	ND	ug/kg	3300					
Ethyl ether	ND	ug/kg	3300					
Surrogate Recovery								
1,2-Dichloroethane-d4	83.0	%						
Toluene-d8	98.0	%						
4-Bromofluorobenzene	98.0	%						
Dibromofluoromethane	93.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-05
SH5 S2

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Extractable Petroleum Hydrocarbons				46 98-1	0626 09:50	0628 21:55	PD

Quality Control Information

Condition of sample received:	Satisfactory	
Sample temperature upon receipt:	Received on Ice	
Sample extraction method:	Extracted Per the Method	
Were all QA/QC procedures REQUIRED by the method followed?		YES
Were all performance/acceptance standards for the required procedures achieved?		YES
Were significant modifications made to the method as specified in Sect 11.3?		NO

Please note to subtract the method blank from the stated result.
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

C9-C18 Aliphatics, Unadjusted	ND	mg/kg	12.8
C19-C36 Aliphatics, Unadjusted	ND	mg/kg	12.8
C11-C22 Aromatics, Unadjusted	41.0	mg/kg	12.8

Surrogate Recovery

Chloro-Octadecane	68.0	%
o-Terphenyl	104.	%
2-Fluorobiphenyl	104.	%
2-Bromonaphthalene	78.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L0206229-06 SHB1 S3	**Date Collected:**	21-JUN-2002 14:00
		Date Received :	26-JUN-2002
Sample Matrix:	SOIL	**Date Reported :**	03-JUL-2002
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 1-Amber,1-Plastic,4-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD		DATE PREP	DATE ANAL	ID
Solids, Total	90.	%	0.10	30	2540G		0626 15:10	DP
Volatile Organics 8260 via High 5035				1	8260B		0701 18:26	RY
Methylene chloride	ND	ug/kg	710					
1,1-Dichloroethane	ND	ug/kg	100					
Chloroform	ND	ug/kg	100					
Carbon tetrachloride	ND	ug/kg	71.					
1,2-Dichloropropane	ND	ug/kg	250					
Dibromochloromethane	ND	ug/kg	71.					
1,2-Trichloroethane	ND	ug/kg	100					
rachloroethene	7800	ug/kg	71.					
Chlorobenzene	ND	ug/kg	71.					
Trichlorofluoromethane	ND	ug/kg	350					
1,2-Dichloroethane	ND	ug/kg	71.					
1,1,1-Trichloroethane	2700	ug/kg	71.					
Bromodichloromethane	ND	ug/kg	71.					
trans-1,3-Dichloropropene	ND	ug/kg	71.					
cis-1,3-Dichloropropene	ND	ug/kg	71.					
1,1-Dichloropropene	ND	ug/kg	350					
Bromoform	ND	ug/kg	71.					
1,1,2,2-Tetrachloroethane	ND	ug/kg	71.					
Benzene	ND	ug/kg	71.					
Toluene	ND	ug/kg	100					
Ethylbenzene	ND	ug/kg	71.					
Chloromethane	ND	ug/kg	350					
Bromomethane	ND	ug/kg	140					
Vinyl chloride	ND	ug/kg	140					
Chloroethane	ND	ug/kg	140					
1,1-Dichloroethene	ND	ug/kg	71.					
trans-1,2-Dichloroethene	ND	ug/kg	100					
Trichloroethene	4400	ug/kg	71.					
1,2-Dichlorobenzene	ND	ug/kg	350					
1,3-Dichlorobenzene	ND	ug/kg	350					
1,4-Dichlorobenzene	ND	ug/kg	350					
Methyl tert butyl ether	ND	ug/kg	140					
p/m-Xylene	ND	ug/kg	71.					
o-Xylene	ND	ug/kg	71.					
s-1,2-Dichloroethene	ND	ug/kg	71.					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-06
SHB1 S3

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics 8260 via High 5035 continued				1	8260B		0701 18:26	RY
Dibromomethane	ND	ug/kg	710					
1,4-Dichlorobutane	ND	ug/kg	710					
Iodomethane	ND	ug/kg	710					
1,2,3-Trichloropropane	ND	ug/kg	710					
Styrene	ND	ug/kg	71.					
Dichlorodifluoromethane	ND	ug/kg	710					
Acetone	ND	ug/kg	710					
Carbon disulfide	ND	ug/kg	710					
2-Butanone	1100	ug/kg	710					
Vinyl acetate	ND	ug/kg	710					
4-Methyl-2-pentanone	860	ug/kg	710					
2-Hexanone	ND	ug/kg	710					
Ethyl methacrylate	ND	ug/kg	710					
Acrolein	ND	ug/kg	1800					
Acrylonitrile	ND	ug/kg	710					
Bromochloromethane	ND	ug/kg	350					
Tetrahydrofuran	ND	ug/kg	1400					
2,2-Dichloropropane	ND	ug/kg	350					
1,2-Dibromoethane	ND	ug/kg	350					
1,3-Dichloropropane	ND	ug/kg	350					
1,1,1,2-Tetrachloroethane	ND	ug/kg	71.					
Bromobenzene	ND	ug/kg	350					
n-Butylbenzene	ND	ug/kg	71.					
sec-Butylbenzene	ND	ug/kg	71.					
tert-Butylbenzene	ND	ug/kg	350					
o-Chlorotoluene	ND	ug/kg	350					
p-Chlorotoluene	ND	ug/kg	350					
1,2-Dibromo-3-chloropropane	ND	ug/kg	350					
Hexachlorobutadiene	ND	ug/kg	350					
Isopropylbenzene	ND	ug/kg	71.					
p-Isopropyltoluene	ND	ug/kg	71.					
Naphthalene	ND	ug/kg	350					
n-Propylbenzene	ND	ug/kg	71.					
1,2,3-Trichlorobenzene	ND	ug/kg	350					
1,2,4-Trichlorobenzene	ND	ug/kg	350					
1,3,5-Trimethylbenzene	ND	ug/kg	350					
1,2,4-Trimethylbenzene	ND	ug/kg	350					
trans-1,4-Dichloro-2-butene	ND	ug/kg	350					
Ethyl ether	ND	ug/kg	350					
Surrogate Recovery								
1,2-Dichloroethane-d4	94.0	%						
Toluene-d8	96.0	%						
4-Bromofluorobenzene	97.0	%						
Dibromofluoromethane	94.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

boratory Sample Number: L0206229-06
SHB1 S3

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Petroleum Hydrocarbons				47 98-1		0629 14:55	MM

Quality Control Information

Condition of sample received:	Satisfactory	
Sample temperature upon receipt:	Received on Ice	
Were samples received in methanol?	Yes (Covering the Soil)	
Methanol ratio:	1:1 +/- 25%	
Were all QA/QC procedures REQUIRED by the method followed?		YES
Were all performance/acceptance standards for the required procedures achieved?		YES
Were significant modifications made to the method as specified in Sect 11.3?		NO

Please note to subtract the method blank from the stated result.
VPH Standard analysis reports only range data with no adjustments.
The normal acceptance range for the surrogate, 2,5-Dibromotoluene, is 70-130%.

PARAMETER	RESULT	UNITS	RDL
C5-C8 Aliphatics, Unadjusted	2.95	mg/kg	2.15
C9-C12 Aliphatics, Unadjusted	ND	mg/kg	2.15
C9-C10 Aromatics, Unadjusted	ND	mg/kg	2.15

Surrogate Recovery

PARAMETER	RESULT	UNITS
5-Dibromotoluene-PID	94.0	%
5-Dibromotoluene-FID	92.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-06
SHB1 S3

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Extractable Petroleum Hydrocarbons				46 98-1	0626 09:50	0628 22:41	PD

Quality Control Information

Condition of sample received: Satisfactory
Sample temperature upon receipt: Received on Ice
Sample extraction method: Extracted Per the Method
Were all QA/QC procedures REQUIRED by the method followed? YES
Were all performance/acceptance standards for the required procedures achieved? YES
Were significant modifications made to the method as specified in Sect 11.3? NO
Please note to subtract the method blank from the stated result.
The normal acceptance range for the extraction surrogates, Chloro-octadecane and o-Terphenyl, is 40-140%.
The normal acceptance range for the fractionation surrogates, 2-Fluorobiphenyl and 2-Bromonaphthalene, is 40-140%.

C9-C18 Aliphatics, Unadjusted	ND	mg/kg	11.1
C19-C36 Aliphatics, Unadjusted	ND	mg/kg	11.1
C11-C22 Aromatics, Unadjusted	ND	mg/kg	11.1

Surrogate Recovery

Chloro-Octadecane	70.0	%
o-Terphenyl	83.0	%
2-Fluorobiphenyl	96.0	%
2-Bromonaphthalene	68.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206229-07
TRIP BLANK
Sample Matrix: SOIL

Date Collected: 18-JUN-2002 19:10
Date Received : 26-JUN-2002
Date Reported : 03-JUL-2002

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 3-Vial

Comments:
Results are reported on an 'AS RECEIVED' basis.

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics 8260 via High 5035				1 8260B		0701 17:15	RY
Methylene chloride	ND	ug/kg	500				
1,1-Dichloroethane	ND	ug/kg	75.				
Chloroform	ND	ug/kg	75.				
Carbon tetrachloride	ND	ug/kg	50.				
1,2-Dichloropropane	ND	ug/kg	180				
Dibromochloromethane	ND	ug/kg	50.				
1,2-Trichloroethane	ND	ug/kg	75.				
crachloroethene	ND	ug/kg	50.				
Chlorobenzene	ND	ug/kg	50.				
Trichlorofluoromethane	ND	ug/kg	250				
1,2-Dichloroethane	ND	ug/kg	50.				
1,1,1-Trichloroethane	ND	ug/kg	50.				
Bromodichloromethane	ND	ug/kg	50.				
trans-1,3-Dichloropropene	ND	ug/kg	50.				
cis-1,3-Dichloropropene	ND	ug/kg	50.				
1,1-Dichloropropene	ND	ug/kg	250				
Bromoform	ND	ug/kg	50.				
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.				
Benzene	ND	ug/kg	50.				
Toluene	ND	ug/kg	75.				
Ethylbenzene	ND	ug/kg	50.				
Chloromethane	ND	ug/kg	250				
Bromomethane	ND	ug/kg	100				
Vinyl chloride	ND	ug/kg	100				
Chloroethane	ND	ug/kg	100				
1,1-Dichloroethene	ND	ug/kg	50.				
trans-1,2-Dichloroethene	ND	ug/kg	75.				
Trichloroethene	ND	ug/kg	50.				
1,2-Dichlorobenzene	ND	ug/kg	250				
1,3-Dichlorobenzene	ND	ug/kg	250				
1,4-Dichlorobenzene	ND	ug/kg	250				
Methyl tert butyl ether	ND	ug/kg	100				
p/m-Xylene	ND	ug/kg	50.				
o-Xylene	ND	ug/kg	50.				
is-1,2-Dichloroethene	ND	ug/kg	50.				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206229-07
TRIP BLANK

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1	8260B		0701 17:15	RY
Dibromomethane	ND	ug/kg	500					
1,4-Dichlorobutane	ND	ug/kg	500					
Iodomethane	ND	ug/kg	500					
1,2,3-Trichloropropane	ND	ug/kg	500					
Styrene	ND	ug/kg	50.					
Dichlorodifluoromethane	ND	ug/kg	500					
Acetone	ND	ug/kg	500					
Carbon disulfide	ND	ug/kg	500					
2-Butanone	ND	ug/kg	500					
Vinyl acetate	ND	ug/kg	500					
4-Methyl-2-pentanone	ND	ug/kg	500					
2-Hexanone	ND	ug/kg	500					
Ethyl methacrylate	ND	ug/kg	500					
Acrolein	ND	ug/kg	1200					
Acrylonitrile	ND	ug/kg	500					
Bromochloromethane	ND	ug/kg	250					
Tetrahydrofuran	ND	ug/kg	1000					
2,2-Dichloropropane	ND	ug/kg	250					
1,2-Dibromoethane	ND	ug/kg	250					
1,3-Dichloropropane	ND	ug/kg	250					
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.					
Bromobenzene	ND	ug/kg	250					
n-Butylbenzene	ND	ug/kg	50.					
sec-Butylbenzene	ND	ug/kg	50.					
tert-Butylbenzene	ND	ug/kg	250					
o-Chlorotoluene	ND	ug/kg	250					
p-Chlorotoluene	ND	ug/kg	250					
1,2-Dibromo-3-chloropropane	ND	ug/kg	250					
Hexachlorobutadiene	ND	ug/kg	250					
Isopropylbenzene	ND	ug/kg	50.					
p-Isopropyltoluene	ND	ug/kg	50.					
Naphthalene	ND	ug/kg	250					
n-Propylbenzene	ND	ug/kg	50.					
1,2,3-Trichlorobenzene	ND	ug/kg	250					
1,2,4-Trichlorobenzene	ND	ug/kg	250					
1,3,5-Trimethylbenzene	ND	ug/kg	250					
1,2,4-Trimethylbenzene	ND	ug/kg	250					
trans-1,4-Dichloro-2-butene	ND	ug/kg	250					
Ethyl ether	ND	ug/kg	250					
Surrogate Recovery								
1,2-Dichloroethane-d4	90.0	%						
Toluene-d8	92.0	%						
4-Bromofluorobenzene	104.	%						
Dibromofluoromethane	96.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

oratory Job Number: L0206229

Parameter	Value 1	Value 2	RPD	Units
Solids, Total for sample(s) 01-06 (L0206229-01, WG116324)				
Solids, Total	92.	92.	0	%
Volatile Petroleum Hydrocarbons for sample(s) 01-04,06 (L0206237-04, WG116518)				
C5-C8 Aliphatics	ND	ND	NC	mg/kg
C9-C12 Aliphatics	ND	ND	NC	mg/kg
C9-C10 Aromatics	ND	ND	NC	mg/kg
C5-C8 Aliphatics, Adjusted	ND	ND	NC	mg/kg
C9-C12 Aliphatics, Adjusted	ND	ND	NC	mg/kg
Benzene	ND	ND	NC	mg/kg
Toluene	ND	ND	NC	mg/kg
Ethylbenzene	ND	ND	NC	mg/kg
p/m-Xylene	ND	ND	NC	mg/kg
o-Xylene	ND	ND	NC	mg/kg
Methyl tert butyl ether	ND	ND	NC	mg/kg
Naphthalene	ND	ND	NC	mg/kg
Surrogate Recovery				
2,5-Dibromotoluene-PID	82.0	102.	22	%
2,5-Dibromotoluene-FID	82.0	100.	20	%
Extractable Petroleum Hydrocarbons for sample(s) 01-06 (L0206207-01, WG116307)				
-C18 Aliphatics	ND	ND	NC	mg/kg
C19-C36 Aliphatics	ND	ND	NC	mg/kg
C11-C22 Aromatics	ND	ND	NC	mg/kg
C11-C22 Aromatics, Adjusted	ND	ND	NC	mg/kg
Naphthalene	ND	ND	NC	mg/kg
2-Methylnaphthalene	ND	ND	NC	mg/kg
Acenaphthylene	ND	ND	NC	mg/kg
Acenaphthene	ND	ND	NC	mg/kg
Fluorene	ND	ND	NC	mg/kg
Phenanthrene	ND	ND	NC	mg/kg
Anthracene	ND	ND	NC	mg/kg
Fluoranthene	ND	ND	NC	mg/kg
Pyrene	ND	ND	NC	mg/kg
Benzo(a)anthracene	ND	ND	NC	mg/kg
Chrysene	ND	ND	NC	mg/kg
Benzo(b)fluoranthene	ND	ND	NC	mg/kg
Benzo(k)fluoranthene	ND	ND	NC	mg/kg
Benzo(a)pyrene	ND	ND	NC	mg/kg
Indeno(1,2,3-cd) Pyrene	ND	ND	NC	mg/kg
Dibenzo(a,h)anthracene	ND	ND	NC	mg/kg
Benzo(ghi)perylene	ND	ND	NC	mg/kg
Surrogate Recovery				
Chloro-Octadecane	64.0	66.0	3	%
o-Terphenyl	84.0	80.0	5	%
2-Fluorobiphenyl	98.0	89.0	10	%
2-Bromonaphthalene	89.0	72.0	21	%

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0206229

Parameter	% Recovery
Volatile Organics 8260 via High 5035 LCS for sample(s) 01-03,05 (WG116609)	
Chlorobenzene	103
Benzene	95
Toluene	102
1,1-Dichloroethene	95
Trichloroethene	101
Surrogate Recovery	
1,2-Dichloroethane-d4	81
Toluene-d8	97
4-Bromofluorobenzene	97
Dibromofluoromethane	93
Volatile Organics 8260 via High 5035 LCS for sample(s) 03 (WG116609)	
Chlorobenzene	97
Benzene	99
Toluene	98
1,1-Dichloroethene	100
Trichloroethene	103
Surrogate Recovery	
1,2-Dichloroethane-d4	99
Toluene-d8	101
4-Bromofluorobenzene	101
Dibromofluoromethane	98
Volatile Organics 8260 via High 5035 LCS for sample(s) 04,06-07 (WG116715)	
Chlorobenzene	97
Benzene	97
Toluene	98
1,1-Dichloroethene	96
Trichloroethene	105
Surrogate Recovery	
1,2-Dichloroethane-d4	93
Toluene-d8	93
4-Bromofluorobenzene	91
Dibromofluoromethane	98
Volatile Petroleum Hydrocarbons LCS for sample(s) 01-04,06 (WG116518)	
Benzene	102
Toluene	92
Ethylbenzene	110
p/m-Xylene	95
o-Xylene	94
Methyl tert butyl ether	88
Naphthalene	85

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

oratory Job Number: L0206229

Continued

Parameter	% Recovery
Volatile Petroleum Hydrocarbons LCS for sample(s) 01-04,06 (WG116518)	
Surrogate Recovery	
2,5-Dibromotoluene-PID	83
2,5-Dibromotoluene-FID	111
Extractable Petroleum Hydrocarbons LCS for sample(s) 01-06 (WG116307)	
Naphthalene	56
Acenaphthene	67
Anthracene	81
Pyrene	84
Chrysene	90
Nonane (C9)	56
Tetradecane (C14)	77
Nonadecane (C19)	86
Eicosane (C20)	88
Octacosane (C28)	87
Surrogate Recovery	
Chloro-Octadecane	75
o-Terphenyl	92
-Fluorobiphenyl	80
Bromonaphthalene	63

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0206229

Parameter	MS %	MSD %	RPD
Volatile Organics 8260 via High 5035 for sample(s) 01-03,05 (L0206236-01, WG116609)			
Chlorobenzene	120	110	9
Benzene	100	95	5
Toluene	110	110	0
1,1-Dichloroethene	110	93	17
Trichloroethene	100	95	5
Volatile Organics 8260 via High 5035 for sample(s) 04,06-07 (L0206229-04, WG116715)			
Chlorobenzene	110	100	10
Benzene	98	91	7
Toluene	100	96	4
1,1-Dichloroethene	93	83	11
Trichloroethene	77	54	35

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

oratory Job Number: L0206229

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Blank Analysis for sample(s) 01-03,05								
Volatile Organics 8260 via High 5035				1	8260B		0628 17:16	AR
Methylene chloride	ND	ug/kg	500					
1,1-Dichloroethane	ND	ug/kg	75.					
Chloroform	ND	ug/kg	75.					
Carbon tetrachloride	ND	ug/kg	50.					
1,2-Dichloropropane	ND	ug/kg	180					
Dibromochloromethane	ND	ug/kg	50.					
1,1,2-Trichloroethane	ND	ug/kg	75.					
Tetrachloroethene	ND	ug/kg	50.					
Chlorobenzene	ND	ug/kg	50.					
Trichlorofluoromethane	ND	ug/kg	250					
1,2-Dichloroethane	ND	ug/kg	50.					
1,1,1-Trichloroethane	ND	ug/kg	50.					
Bromodichloromethane	ND	ug/kg	50.					
trans-1,3-Dichloropropene	ND	ug/kg	50.					
cis-1,3-Dichloropropene	ND	ug/kg	50.					
1,1-Dichloropropene	ND	ug/kg	250					
Bromoform	ND	ug/kg	50.					
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.					
Benzene	ND	ug/kg	50.					
luene	ND	ug/kg	75.					
Ethylbenzene	ND	ug/kg	50.					
Chloromethane	ND	ug/kg	250					
Bromomethane	ND	ug/kg	100					
Vinyl chloride	ND	ug/kg	100					
Chloroethane	ND	ug/kg	100					
1,1-Dichloroethene	ND	ug/kg	50.					
trans-1,2-Dichloroethene	ND	ug/kg	75.					
Trichloroethene	ND	ug/kg	50.					
1,2-Dichlorobenzene	ND	ug/kg	250					
1,3-Dichlorobenzene	ND	ug/kg	250					
1,4-Dichlorobenzene	ND	ug/kg	250					
Methyl tert butyl ether	ND	ug/kg	100					
p/m-Xylene	ND	ug/kg	50.					
o-Xylene	ND	ug/kg	50.					
cis-1,2-Dichloroethene	ND	ug/kg	50.					
Dibromomethane	ND	ug/kg	500					
1,4-Dichlorobutane	ND	ug/kg	500					
Iodomethane	ND	ug/kg	500					
1,2,3-Trichloropropane	ND	ug/kg	500					
Styrene	ND	ug/kg	50.					
Dichlorodifluoromethane	ND	ug/kg	500					
Acetone	ND	ug/kg	500					
Carbon disulfide	ND	ug/kg	500					
2-Butanone	ND	ug/kg	500					
Vinyl acetate	ND	ug/kg	500					
4-Methyl-2-pentanone	ND	ug/kg	500					
2-Hexanone	ND	ug/kg	500					

Laboratory Job Number: L0206229

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-03,05								
Volatile Organics 8260 via High 5035 continued				1	8260B		0628 17:16	AR
Ethyl methacrylate	ND	ug/kg	500					
Acrolein	ND	ug/kg	1200					
Acrylonitrile	ND	ug/kg	500					
Bromochloromethane	ND	ug/kg	250					
Tetrahydrofuran	ND	ug/kg	1000					
2,2-Dichloropropane	ND	ug/kg	250					
1,2-Dibromoethane	ND	ug/kg	250					
1,3-Dichloropropane	ND	ug/kg	250					
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.					
Bromobenzene	ND	ug/kg	250					
n-Butylbenzene	ND	ug/kg	50.					
sec-Butylbenzene	ND	ug/kg	50.					
tert-Butylbenzene	ND	ug/kg	250					
o-Chlorotoluene	ND	ug/kg	250					
p-Chlorotoluene	ND	ug/kg	250					
1,2-Dibromo-3-chloropropane	ND	ug/kg	250					
Hexachlorobutadiene	ND	ug/kg	250					
Isopropylbenzene	ND	ug/kg	50.					
p-Isopropyltoluene	ND	ug/kg	50.					
Naphthalene	ND	ug/kg	250					
n-Propylbenzene	ND	ug/kg	50.					
1,2,3-Trichlorobenzene	ND	ug/kg	250					
1,2,4-Trichlorobenzene	ND	ug/kg	250					
1,3,5-Trimethylbenzene	ND	ug/kg	250					
1,2,4-Trimethylbenzene	ND	ug/kg	250					
trans-1,4-Dichloro-2-butene	ND	ug/kg	250					
Ethyl ether	ND	ug/kg	250					
Surrogate Recovery								
1,2-Dichloroethane-d4	82.0	%						
Toluene-d8	97.0	%						
4-Bromofluorobenzene	95.0	%						
Dibromofluoromethane	93.0	%						
Blank Analysis for sample(s) 03								
Volatile Organics 8260 via High 5035				1	8260B		0702 10:09	AR
Methylene chloride	ND	ug/kg	500					
1,1-Dichloroethane	ND	ug/kg	75.					
Chloroform	ND	ug/kg	75.					
Carbon tetrachloride	ND	ug/kg	50.					
1,2-Dichloropropane	ND	ug/kg	180					
Dibromochloromethane	ND	ug/kg	50.					
1,1,2-Trichloroethane	ND	ug/kg	75.					
Tetrachloroethene	ND	ug/kg	50.					
Chlorobenzene	ND	ug/kg	50.					
Trichlorofluoromethane	ND	ug/kg	250					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

oratory Job Number: L0206229

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 03								
Volatile Organics 8260 via High 5035 continued				1	8260B		0702 10:09	AR
1,2-Dichloroethane	ND	ug/kg	50.					
1,1,1-Trichloroethane	ND	ug/kg	50.					
Bromodichloromethane	ND	ug/kg	50.					
trans-1,3-Dichloropropene	ND	ug/kg	50.					
cis-1,3-Dichloropropene	ND	ug/kg	50.					
1,1-Dichloropropene	ND	ug/kg	250					
Bromoform	ND	ug/kg	50.					
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.					
Benzene	ND	ug/kg	50.					
Toluene	ND	ug/kg	75.					
Ethylbenzene	ND	ug/kg	50.					
Chloromethane	ND	ug/kg	250					
Bromomethane	ND	ug/kg	100					
Vinyl chloride	ND	ug/kg	100					
Chloroethane	ND	ug/kg	100					
1,1-Dichloroethene	ND	ug/kg	50.					
trans-1,2-Dichloroethene	ND	ug/kg	75.					
Trichloroethene	ND	ug/kg	50.					
2-Dichlorobenzene	ND	ug/kg	250					
3-Dichlorobenzene	ND	ug/kg	250					
1,4-Dichlorobenzene	ND	ug/kg	250					
Methyl tert butyl ether	ND	ug/kg	100					
p/m-Xylene	ND	ug/kg	50.					
o-Xylene	ND	ug/kg	50.					
cis-1,2-Dichloroethene	ND	ug/kg	50.					
Dibromomethane	ND	ug/kg	500					
1,4-Dichlorobutane	ND	ug/kg	500					
Iodomethane	ND	ug/kg	500					
1,2,3-Trichloropropane	ND	ug/kg	500					
Styrene	ND	ug/kg	50.					
Dichlorodifluoromethane	ND	ug/kg	500					
Acetone	ND	ug/kg	500					
Carbon disulfide	ND	ug/kg	500					
2-Butanone	ND	ug/kg	500					
Vinyl acetate	ND	ug/kg	500					
4-Methyl-2-pentanone	ND	ug/kg	500					
2-Hexanone	ND	ug/kg	500					
Ethyl methacrylate	ND	ug/kg	500					
Acrolein	ND	ug/kg	1200					
Acrylonitrile	ND	ug/kg	500					
Bromochloromethane	ND	ug/kg	250					
Tetrahydrofuran	ND	ug/kg	1000					
2,2-Dichloropropane	ND	ug/kg	250					
1,2-Dibromoethane	ND	ug/kg	250					
1,3-Dichloropropane	ND	ug/kg	250					
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.					
romobenzene	ND	ug/kg	250					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206229

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Blank Analysis for sample(s) 03								
Volatile Organics 8260 via High 5035 continued				1	8260B		0702 10:09	AR
n-Butylbenzene	ND	ug/kg	50.					
sec-Butylbenzene	ND	ug/kg	50.					
tert-Butylbenzene	ND	ug/kg	250					
o-Chlorotoluene	ND	ug/kg	250					
p-Chlorotoluene	ND	ug/kg	250					
1,2-Dibromo-3-chloropropane	ND	ug/kg	250					
Hexachlorobutadiene	ND	ug/kg	250					
Isopropylbenzene	ND	ug/kg	50.					
p-Isopropyltoluene	ND	ug/kg	50.					
Naphthalene	ND	ug/kg	250					
n-Propylbenzene	ND	ug/kg	50.					
1,2,3-Trichlorobenzene	ND	ug/kg	250					
1,2,4-Trichlorobenzene	ND	ug/kg	250					
1,3,5-Trimethylbenzene	ND	ug/kg	250					
1,2,4-Trimethylbenzene	ND	ug/kg	250					
trans-1,4-Dichloro-2-butene	ND	ug/kg	250					
Ethyl ether	ND	ug/kg	250					
Surrogate Recovery								
1,2-Dichloroethane-d4	100.	%						
Toluene-d8	100.	%						
4-Bromofluorobenzene	105.	%						
Dibromofluoromethane	100.	%						
Blank Analysis for sample(s) 04,06-07								
Volatile Organics 8260 via High 5035				1	8260B		0701 16:04	RY
Methylene chloride	ND	ug/kg	500					
1,1-Dichloroethane	ND	ug/kg	75.					
Chloroform	ND	ug/kg	75.					
Carbon tetrachloride	ND	ug/kg	50.					
1,2-Dichloropropane	ND	ug/kg	180					
Dibromochloromethane	ND	ug/kg	50.					
1,1,2-Trichloroethane	ND	ug/kg	75.					
Tetrachloroethene	ND	ug/kg	50.					
Chlorobenzene	ND	ug/kg	50.					
Trichlorofluoromethane	ND	ug/kg	250					
1,2-Dichloroethane	ND	ug/kg	50.					
1,1,1-Trichloroethane	ND	ug/kg	50.					
Bromodichloromethane	ND	ug/kg	50.					
trans-1,3-Dichloropropene	ND	ug/kg	50.					
cis-1,3-Dichloropropene	ND	ug/kg	50.					
1,1-Dichloropropene	ND	ug/kg	250					
Bromoform	ND	ug/kg	50.					
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.					
Benzene	ND	ug/kg	50.					
Toluene	ND	ug/kg	75.					

oratory Job Number: L0206229

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 04,06-07								
Volatile Organics 8260 via High 5035 continued				1	8260B		0701 16:04	RY
Ethylbenzene	ND	ug/kg	50.					
Chloromethane	ND	ug/kg	250					
Bromomethane	ND	ug/kg	100					
Vinyl chloride	ND	ug/kg	100					
Chloroethane	ND	ug/kg	100					
1,1-Dichloroethene	ND	ug/kg	50.					
trans-1,2-Dichloroethene	ND	ug/kg	75.					
Trichloroethene	ND	ug/kg	50.					
1,2-Dichlorobenzene	ND	ug/kg	250					
1,3-Dichlorobenzene	ND	ug/kg	250					
1,4-Dichlorobenzene	ND	ug/kg	250					
Methyl tert butyl ether	ND	ug/kg	100					
p/m-Xylene	ND	ug/kg	50.					
o-Xylene	ND	ug/kg	50.					
cis-1,2-Dichloroethene	ND	ug/kg	50.					
Dibromomethane	ND	ug/kg	500					
1,4-Dichlorobutane	ND	ug/kg	500					
Iodomethane	ND	ug/kg	500					
2,3-Trichloropropane	ND	ug/kg	500					
yrene	ND	ug/kg	50.					
Dichlorodifluoromethane	ND	ug/kg	500					
Acetone	ND	ug/kg	500					
Carbon disulfide	ND	ug/kg	500					
2-Butanone	ND	ug/kg	500					
Vinyl acetate	ND	ug/kg	500					
4-Methyl-2-pentanone	ND	ug/kg	500					
2-Hexanone	ND	ug/kg	500					
Ethyl methacrylate	ND	ug/kg	500					
Acrolein	ND	ug/kg	1200					
Acrylonitrile	ND	ug/kg	500					
Bromochloromethane	ND	ug/kg	250					
Tetrahydrofuran	ND	ug/kg	1000					
2,2-Dichloropropane	ND	ug/kg	250					
1,2-Dibromoethane	ND	ug/kg	250					
1,3-Dichloropropane	ND	ug/kg	250					
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.					
Bromobenzene	ND	ug/kg	250					
n-Butylbenzene	ND	ug/kg	50.					
sec-Butylbenzene	ND	ug/kg	50.					
tert-Butylbenzene	ND	ug/kg	250					
o-Chlorotoluene	ND	ug/kg	250					
p-Chlorotoluene	ND	ug/kg	250					
1,2-Dibromo-3-chloropropane	ND	ug/kg	250					
Hexachlorobutadiene	ND	ug/kg	250					
Isopropylbenzene	ND	ug/kg	50.					
p-Isopropyltoluene	ND	ug/kg	50.					
aphthalene	ND	ug/kg	250					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206229

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 04,06-07							
Volatile Organics 8260 via High 5035 continued				1 8260B		0701 16:04	RY
n-Propylbenzene	ND	ug/kg	50.				
1,2,3-Trichlorobenzene	ND	ug/kg	250				
1,2,4-Trichlorobenzene	ND	ug/kg	250				
1,3,5-Trimethylbenzene	ND	ug/kg	250				
1,2,4-Trimethylbenzene	ND	ug/kg	250				
trans-1,4-Dichloro-2-butene	ND	ug/kg	250				
Ethyl ether	ND	ug/kg	250				
Surrogate Recovery							
1,2-Dichloroethane-d4	92.0	%					
Toluene-d8	92.0	%					
4-Bromofluorobenzene	100.	%					
Dibromofluoromethane	95.0	%					
Blank Analysis for sample(s) 01-03							
Volatile Petroleum Hydrocarbons				47 98-1		0628 12:34	MM
C5-C8 Aliphatics, Unadjusted	ND	mg/kg	2.00				
C9-C12 Aliphatics, Unadjusted	ND	mg/kg	2.00				
C9-C10 Aromatics, Unadjusted	ND	mg/kg	2.00				
C5-C8 Aliphatics, Adjusted	ND	mg/kg	2.00				
C9-C12 Aliphatics, Adjusted	ND	mg/kg	2.00				
Benzene	ND	mg/kg	0.100				
Toluene	ND	mg/kg	0.100				
Ethylbenzene	ND	mg/kg	0.100				
p/m-Xylene	ND	mg/kg	0.100				
o-Xylene	ND	mg/kg	0.100				
Methyl tert butyl ether	ND	mg/kg	0.200				
Naphthalene	ND	mg/kg	1.00				
Surrogate Recovery							
2,5-Dibromotoluene-PID	89.0	%					
2,5-Dibromotoluene-FID	87.0	%					
Blank Analysis for sample(s) 04,06							
Volatile Petroleum Hydrocarbons				47 98-1		0629 12:55	MM
C5-C8 Aliphatics, Unadjusted	ND	mg/kg	2.00				
C9-C12 Aliphatics, Unadjusted	ND	mg/kg	2.00				
C9-C10 Aromatics, Unadjusted	ND	mg/kg	2.00				
Surrogate Recovery							
2,5-Dibromotoluene-PID	93.0	%					
2,5-Dibromotoluene-FID	95.0	%					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

oratory Job Number: L0206229

Continued

Blank Analysis for sample(s) 01-06

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Extractable Petroleum Hydrocarbons				46 98-1	0626 09:50	0627 11:31	PD
C9-C18 Aliphatics, Unadjusted	ND	mg/kg	10.0				
C19-C36 Aliphatics, Unadjusted	ND	mg/kg	10.0				
C11-C22 Aromatics, Unadjusted	ND	mg/kg	10.0				
C11-C22 Aromatics, Adjusted	ND	mg/kg	10.0				
Naphthalene	ND	mg/kg	0.500				
2-Methylnaphthalene	ND	mg/kg	0.500				
Acenaphthylene	ND	mg/kg	0.500				
Acenaphthene	ND	mg/kg	0.500				
Fluorene	ND	mg/kg	0.500				
Phenanthrene	ND	mg/kg	0.500				
Anthracene	ND	mg/kg	0.500				
Fluoranthene	ND	mg/kg	0.500				
Pyrene	ND	mg/kg	0.500				
Benzo(a)anthracene	ND	mg/kg	0.500				
Chrysene	ND	mg/kg	0.500				
Benzo(b)fluoranthene	ND	mg/kg	0.500				
Benzo(k)fluoranthene	ND	mg/kg	0.500				
Benzo(a)pyrene	ND	mg/kg	0.500				
deno(1,2,3-cd) Pyrene	ND	mg/kg	0.500				
benzo(a,h)anthracene	ND	mg/kg	0.500				
Benzo(g,h,i)perylene	ND	mg/kg	0.500				
Surrogate Recovery							
Chloro-Octadecane	76.0	%					
o-Terphenyl	88.0	%					
2-Fluorobiphenyl	101.	%					
2-Bromonaphthalene	65.0	%					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Update III, 1997.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

46. Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), Massachusetts Department of Environmental Protection, (MADEP-EPH-98-1), January 1998.

47. Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), Massachusetts Department of Environmental Protection, (MADEP-VPH-98-1), January 1998.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.

Please note that all solid samples are reported on dry weight basis unless noted otherwise.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

attachment 1

Quality Control Acceptance Criteria

Volatile Organics by Method 8260B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
1,2-Dichloroethane-d_4	75%	125%	75%	125%
4-Bromofluorobenzene	75%	125%	75%	125%
Toluene-d_8	75%	125%	75%	125%
Dibromofluoromethane	75%	125%	75%	125%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	61%	145%	59%	172%	all target compounds	
Trichloroethene	71%	120%	62%	137%	20%	30%
Chlorobenzene	75%	130%	60%	133%		
Benzene	76%	127%	66%	142%		
Toluene	76%	125%	59%	139%		

Volatile Organics by Method 8021B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
4-Bromochlorobenzene	70%	110%	70%	120%
4-Bromofluorobenzene	70%	110%	70%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	70%	130%	70%	130%	all target compounds	
Trichloroethene	70%	130%	70%	130%	20%	30%
Chlorobenzene	70%	130%	70%	130%		
Benzene	70%	130%	70%	130%		
Toluene	70%	130%	70%	130%		
Ethylbenzene	70%	130%	70%	130%		

Semi-Volatile Organics by Method 8270C (includes PAHs)

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
Nitrobenzene-d_5	23%	120%	23%	120%
Phenol-d_6	10%	120%	10%	120%
2-Fluorophenol	21%	120%	25%	120%
2-Fluorobiphenyl	43%	120%	30%	120%
p-Terphenyl-d_{14}	33%	120%	18%	120%
2,4,6-Tribromophenol	10%	120%	19%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,2,4-Trichlorobenzene	39%	98%	38%	107%	all target compounds	
Acenaphthene	46%	118%	31%	137%	40%	50%
2,4-Dinitrotoluene	24%	96%	28%	89%		
Pyrene	26%	127%	35%	142%		
N-Nitroso-di-n-propylamine	41%	116%	41%	126%		
1,4-Dichlorobenzene	36%	97%	28%	104%		
Pentachlorophenol	9%	103%	17%	109%		
Phenol	12%	110%	26%	90%		
2-Chlorophenol	27%	123%	25%	102%		
4-Chloro-3-methylphenol	23%	97%	26%	103%		
4-Nitrophenol	10%	80%	11%	114%		

attachment 1

Quality Control Acceptance Criteria

PCB/Pesticides by Method 8082/8081

surrogate spike % recovery	AQ Limits		Soil Limits			
	LCL	UCL	LCL	UCL		
2,4,5,6-Tetrachloro-m-xylene	40%	120%	40%	120%		
Decachlorobiphenyl	40%	120%	40%	120%		
matrix spike / matrix spike duplicate	percent recovery				duplicate and/or MSD	
(MS/MSD) & lab control sample (LCS)	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
Lindane	56%	123%	46%	127%	all target compounds	
Heptachlor	40%	131%	35%	130%	30%	50%
Aldrin	40%	120%	34%	132%		
Dieldrin	52%	126%	31%	134%		
Endrin	56%	121%	42%	139%		
4,4'-DDT	38%	127%	23%	134%		
Aroclor 1242/1016	40%	140%	40%	140%		
Aroclor 1260	40%	140%	40%	140%		

Volatile Petroleum Hydrocarbons (VPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits			
	LCL	UCL	LCL	UCL		
2,5-Dibromotoluene	70%	130%	70%	130%		
	percent recovery				duplicate	
laboratory control sample (LCS)	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	70%	130%	70%	130%	50%	50%

Extractable Petroleum Hydrocarbons (EPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits			
	LCL	UCL	LCL	UCL		
Chloro-octadecane	40%	140%	40%	140%		
ortho-Terphenyl	40%	140%	40%	140%		
2-Fluorobiphenyl (fractionation)	40%	140%	40%	140%		
2-Bromonaphthalene (fractionation)	40%	140%	40%	140%		
	percent recovery				duplicate	
laboratory control sample (LCS)	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	40%	140%	40%	140%	50%	50%

TPH (GC-FID) by Method 8100M

					duplicate	
surrogate spike % recovery	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
ortho-Terphenyl	40%	140%	40%	140%	40%	40%

TPH by Method 418.1

matrix spike (MS)	percent recovery				duplicate	
& laboratory control sample (LCS)	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
TPH	60%	140%	60%	140%	40%	40%

attachment 1

Quality Control Acceptance Criteria

Trace Metals by Method 6010B/7000 series

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
target analyte	75%	125%	70%	140%	20%	35%

Mercury by Method 7470A/7471A

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
mercury	70%	130%	60%	140%	35%	45%

Total Cyanide by Method 9010B

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
cyanide	80%	120%	65%	135%	30%	40%

Total Phenol by Method 9065

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
phenol	70%	130%	65%	135%	20%	30%

CHAIN OF CUSTODY

PAGE_____ OF _____

ALPHA

Eight Walkup Drive Westborough, MA 01581
TEL: 508-898-9220 FAX: 508-898-9193

Date Rec'd in Lab: [illegible]

ALPHA Job #: L0206229

Client Information

Client: Sanborn Head + Associates
Address: 239 Littleton Rd Suite 1C
Westford MA 01886
Phone: 978 392 0900
Fax: 0987
Email: jhillegas@Sanborn-Head.com

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 2170
Project Location: Somerville MA
Project #: 2170
Project Manager: Duncan Wood
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: 7-3-02 Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker: _____
(Default based on Regulatory Criteria Indicated)
Other Formats: _____
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client Info
PO #:

Regulatory Requirements/Report Limits

State /Fed	Program	Criteria

Other Project Specific Requirements/Comments:

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC 8260 H	VOC 8260 L	EPH	VPH	Total Solids	Sample Specific Comments	TOTAL # BOTTLES
	SH1 S4	6/21/02	0945			1	2	1	1	1		6
	SH2 S2A	6/21/02	1045			1	2	1	1	1		6
	SH3 S1D	6/21/02	1145			1	2	1	1	1		6
	SH4 S3	6/21/02	1245			1	2	1	1	1		6
	SH5 S2	6/21/02	1500			1	1	1		1		4
	SHB1 S3	6/21/02	1400			1	2	1	1	1		6

Shaded Gray Areas For Lab Use Only

Container Type	V	V	A	V	P
Preservative	F	G	A	F	A

Relinquished By:	Date/Time	Received By:	Date/Time
			6/26/02 1030
			6/26/02 134

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's [illegible] Terms. See reverse side.

RECEIVED JUL 1 5 200

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Sanborn, Head & Associates, Inc.

Address: 239 Littleton Road
Suite 1C
Westford, MA 01886

Attn: Mr. Duncan Wood

Project Number: 2170

Site: 2170

Laboratory Job Number: L0206435

Invoice Number: 65544

Date Received: 02-JUL-02

Date Reported: 11-JUL-02

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0206435-01	MW1	SOMERVILLE, MA
L0206435-02	MW-3	SOMERVILLE, MA
L0206435-03	TRIP BLANK	SOMERVILLE, MA

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Scott McLean

Scott McLean - Technical Director
This document electronically signed

ALPHA ANALYTICAL LABORATORIES
NARRATIVE REPORT

Laboratory Job Number: L0206435

Alpha Report L0206435:

Volatile Organics

Alpha Sample(s) L0206435-01 and -02 have elevated limits of detection due to the dilutions required by the elevated concentrations of target compounds in the samples.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206435-01
MW1
Sample Matrix: WATER
Condition of Sample: Satisfactory
Number & Type of Containers: 2-Vial

Date Collected: 01-JUL-2002 11:45
Date Received : 02-JUL-2002
Date Reported : 11-JUL-2002
Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260				1	8260B		0711 14:25	RY
Methylene chloride	ND	ug/l	50000					
1,1-Dichloroethane	ND	ug/l	7500					
Chloroform	ND	ug/l	7500					
Carbon tetrachloride	ND	ug/l	5000					
1,2-Dichloropropane	ND	ug/l	18000					
Dibromochloromethane	ND	ug/l	5000					
1,1,2-Trichloroethane	ND	ug/l	7500					
Tetrachloroethene	52000	ug/l	5000					
Chlorobenzene	ND	ug/l	5000					
Trichlorofluoromethane	ND	ug/l	25000					
,2-Dichloroethane	ND	ug/l	5000					
1,1,1-Trichloroethane	290000	ug/l	5000					
Bromodichloromethane	ND	ug/l	5000					
trans-1,3-Dichloropropene	ND	ug/l	5000					
cis-1,3-Dichloropropene	ND	ug/l	5000					
1,1-Dichloropropene	ND	ug/l	25000					
Bromoform	ND	ug/l	5000					
1,1,2,2-Tetrachloroethane	ND	ug/l	5000					
Benzene	ND	ug/l	5000					
Toluene	ND	ug/l	7500					
Ethylbenzene	ND	ug/l	5000					
Chloromethane	ND	ug/l	25000					
Bromomethane	ND	ug/l	10000					
Vinyl chloride	ND	ug/l	10000					
Chloroethane	ND	ug/l	10000					
1,1-Dichloroethene	ND	ug/l	5000					
trans-1,2-Dichloroethene	ND	ug/l	7500					
Trichloroethene	220000	ug/l	5000					
1,2-Dichlorobenzene	ND	ug/l	25000					
1,3-Dichlorobenzene	ND	ug/l	25000					
1,4-Dichlorobenzene	ND	ug/l	25000					
Methyl tert butyl ether	ND	ug/l	10000					
p/m-Xylene	ND	ug/l	5000					
o-Xylene	ND	ug/l	5000					
cis-1,2-Dichloroethene	ND	ug/l	5000					
Dibromomethane	ND	ug/l	50000					
1,4-Dichlorobutane	ND	ug/l	50000					
Iodomethane	ND	ug/l	50000					

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0206435-01
MW1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B		0711 14:25	RY
1,2,3-Trichloropropane	ND	ug/l	50000					
Styrene	ND	ug/l	5000					
Dichlorodifluoromethane	ND	ug/l	50000					
Acetone	ND	ug/l	50000					
Carbon disulfide	ND	ug/l	50000					
2-Butanone	ND	ug/l	50000					
Vinyl acetate	ND	ug/l	50000					
4-Methyl-2-pentanone	ND	ug/l	50000					
2-Hexanone	ND	ug/l	50000					
Ethyl methacrylate	ND	ug/l	50000					
Acrolein	ND	ug/l	120000					
Acrylonitrile	ND	ug/l	50000					
Bromochloromethane	ND	ug/l	25000					
Tetrahydrofuran	ND	ug/l	100000					
2,2-Dichloropropane	ND	ug/l	25000					
1,2-Dibromoethane	ND	ug/l	25000					
1,3-Dichloropropane	ND	ug/l	25000					
1,1,1,2-Tetrachloroethane	ND	ug/l	5000					
Bromobenzene	ND	ug/l	25000					
n-Butylbenzene	ND	ug/l	5000					
sec-Butylbenzene	ND	ug/l	5000					
tert-Butylbenzene	ND	ug/l	25000					
o-Chlorotoluene	ND	ug/l	25000					
p-Chlorotoluene	ND	ug/l	25000					
1,2-Dibromo-3-chloropropane	ND	ug/l	25000					
Hexachlorobutadiene	ND	ug/l	25000					
Isopropylbenzene	ND	ug/l	5000					
p-Isopropyltoluene	ND	ug/l	5000					
Naphthalene	ND	ug/l	25000					
n-Propylbenzene	ND	ug/l	5000					
1,2,3-Trichlorobenzene	ND	ug/l	25000					
1,2,4-Trichlorobenzene	ND	ug/l	25000					
1,3,5-Trimethylbenzene	ND	ug/l	25000					
1,2,4-Trimethylbenzene	ND	ug/l	25000					
trans-1,4-Dichloro-2-butene	ND	ug/l	25000					
Ethyl ether	ND	ug/l	25000					
Surrogate Recovery								
1,2-Dichloroethane-d4	105.	%						
Toluene-d8	103.	%						
4-Bromofluorobenzene	105.	%						
Dibromofluoromethane	99.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206435-02
MW-3
Sample Matrix: WATER
Condition of Sample: Satisfactory
Number & Type of Containers: 2-Vial

Date Collected: 01-JUL-2002 12:00
Date Received : 02-JUL-2002
Date Reported : 11-JUL-2002
Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 8260				1	8260B		0711 15:00	RY
Methylene chloride	ND	ug/l	2500					
1,1-Dichloroethane	ND	ug/l	380					
Chloroform	ND	ug/l	380					
Carbon tetrachloride	ND	ug/l	250					
1,2-Dichloropropane	ND	ug/l	880					
Dibromochloromethane	ND	ug/l	250					
1,1,2-Trichloroethane	ND	ug/l	380					
Tetrachloroethene	16000	ug/l	250					
Chlorobenzene	ND	ug/l	250					
richlorofluoromethane	ND	ug/l	1200					
,2-Dichloroethane	ND	ug/l	250					
1,1,1-Trichloroethane	ND	ug/l	250					
Bromodichloromethane	ND	ug/l	250					
trans-1,3-Dichloropropene	ND	ug/l	250					
cis-1,3-Dichloropropene	ND	ug/l	250					
1,1-Dichloropropene	ND	ug/l	1200					
Bromoform	ND	ug/l	250					
1,1,2,2-Tetrachloroethane	ND	ug/l	250					
Benzene	ND	ug/l	250					
Toluene	ND	ug/l	380					
Ethylbenzene	ND	ug/l	250					
Chloromethane	ND	ug/l	1200					
Bromomethane	ND	ug/l	500					
Vinyl chloride	ND	ug/l	500					
Chloroethane	ND	ug/l	500					
1,1-Dichloroethene	ND	ug/l	250					
trans-1,2-Dichloroethene	ND	ug/l	380					
Trichloroethene	ND	ug/l	250					
1,2-Dichlorobenzene	ND	ug/l	1200					
1,3-Dichlorobenzene	ND	ug/l	1200					
1,4-Dichlorobenzene	ND	ug/l	1200					
Methyl tert butyl ether	ND	ug/l	500					
p/m-Xylene	ND	ug/l	250					
o-Xylene	ND	ug/l	250					
cis-1,2-Dichloroethene	ND	ug/l	250					
Dibromomethane	ND	ug/l	2500					
1,4-Dichlorobutane	ND	ug/l	2500					
odomethane	ND	ug/l	2500					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206435-02
MW-3

PARAMETER	RESULT	UNITS	RDL	REF METHOD		DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B		0711 15:00	RY
1,2,3-Trichloropropane	ND	ug/l	2500					
Styrene	ND	ug/l	250					
Dichlorodifluoromethane	ND	ug/l	2500					
Acetone	ND	ug/l	2500					
Carbon disulfide	ND	ug/l	2500					
2-Butanone	ND	ug/l	2500					
Vinyl acetate	ND	ug/l	2500					
4-Methyl-2-pentanone	ND	ug/l	2500					
2-Hexanone	ND	ug/l	2500					
Ethyl methacrylate	ND	ug/l	2500					
Acrolein	ND	ug/l	6200					
Acrylonitrile	ND	ug/l	2500					
Bromochloromethane	ND	ug/l	1200					
Tetrahydrofuran	ND	ug/l	5000					
2,2-Dichloropropane	ND	ug/l	1200					
1,2-Dibromoethane	ND	ug/l	1200					
1,3-Dichloropropane	ND	ug/l	1200					
1,1,1,2-Tetrachloroethane	ND	ug/l	250					
Bromobenzene	ND	ug/l	1200					
n-Butylbenzene	ND	ug/l	250					
sec-Butylbenzene	ND	ug/l	250					
tert-Butylbenzene	ND	ug/l	1200					
o-Chlorotoluene	ND	ug/l	1200					
p-Chlorotoluene	ND	ug/l	1200					
1,2-Dibromo-3-chloropropane	ND	ug/l	1200					
Hexachlorobutadiene	ND	ug/l	1200					
Isopropylbenzene	ND	ug/l	250					
p-Isopropyltoluene	ND	ug/l	250					
Naphthalene	ND	ug/l	1200					
n-Propylbenzene	ND	ug/l	250					
1,2,3-Trichlorobenzene	ND	ug/l	1200					
1,2,4-Trichlorobenzene	ND	ug/l	1200					
1,3,5-Trimethylbenzene	ND	ug/l	1200					
1,2,4-Trimethylbenzene	ND	ug/l	1200					
trans-1,4-Dichloro-2-butene	ND	ug/l	1200					
Ethyl ether	ND	ug/l	1200					
Surrogate Recovery								
1,2-Dichloroethane-d4	103.	%						
Toluene-d8	99.0	%						
4-Bromofluorobenzene	111.	%						
Dibromofluoromethane	102.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L0206435-03 TRIP BLANK	**Date Collected:**	18-JUN-2002 14:30
Sample Matrix:	WATER	**Date Received :**	02-JUL-2002
		Date Reported :	11-JUL-2002
Condition of Sample:	Satisfactory	**Field Prep:**	None
Number & Type of Containers:	1-Vial		

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260				1	8260B		0703 18:02	BT
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	0.75					
Chloroform	ND	ug/l	0.75					
Carbon tetrachloride	ND	ug/l	0.50					
1,2-Dichloropropane	ND	ug/l	1.8					
Dibromochloromethane	ND	ug/l	0.50					
1,1,2-Trichloroethane	ND	ug/l	0.75					
Tetrachloroethene	ND	ug/l	0.50					
Chlorobenzene	ND	ug/l	0.50					
ichlorofluoromethane	ND	ug/l	2.5					
,2-Dichloroethane	ND	ug/l	0.50					
1,1,1-Trichloroethane	ND	ug/l	0.50					
Bromodichloromethane	ND	ug/l	0.50					
trans-1,3-Dichloropropene	ND	ug/l	0.50					
cis-1,3-Dichloropropene	ND	ug/l	0.50					
1,1-Dichloropropene	ND	ug/l	2.5					
Bromoform	ND	ug/l	0.50					
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50					
Benzene	ND	ug/l	0.50					
Toluene	ND	ug/l	0.75					
Ethylbenzene	ND	ug/l	0.50					
Chloromethane	ND	ug/l	2.5					
Bromomethane	ND	ug/l	1.0					
Vinyl chloride	ND	ug/l	1.0					
Chloroethane	ND	ug/l	1.0					
1,1-Dichloroethene	ND	ug/l	0.50					
trans-1,2-Dichloroethene	ND	ug/l	0.75					
Trichloroethene	ND	ug/l	0.50					
1,2-Dichlorobenzene	ND	ug/l	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l	2.5					
Methyl tert butyl ether	ND	ug/l	1.0					
p/m-Xylene	ND	ug/l	0.50					
o-Xylene	ND	ug/l	0.50					
cis-1,2-Dichloroethene	ND	ug/l	0.50					
Dibromomethane	ND	ug/l	5.0					
1,4-Dichlorobutane	ND	ug/l	5.0					
odomethane	ND	ug/l	5.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206435-03
TRIP BLANK

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B		0703 18:02	BT
1,2,3-Trichloropropane	ND	ug/l	5.0					
Styrene	ND	ug/l	0.50					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/l	5.0					
4-Methyl-2-pentanone	ND	ug/l	5.0					
2-Hexanone	ND	ug/l	5.0					
Ethyl methacrylate	ND	ug/l	5.0					
Acrolein	ND	ug/l	12.					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/l	2.5					
1,2-Dibromoethane	ND	ug/l	2.5					
1,3-Dichloropropane	ND	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50					
Bromobenzene	ND	ug/l	2.5					
n-Butylbenzene	ND	ug/l	0.50					
sec-Butylbenzene	ND	ug/l	0.50					
tert-Butylbenzene	ND	ug/l	2.5					
o-Chlorotoluene	ND	ug/l	2.5					
p-Chlorotoluene	ND	ug/l	2.5					
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5					
Hexachlorobutadiene	ND	ug/l	2.5					
Isopropylbenzene	ND	ug/l	0.50					
p-Isopropyltoluene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	2.5					
n-Propylbenzene	ND	ug/l	0.50					
1,2,3-Trichlorobenzene	ND	ug/l	2.5					
1,2,4-Trichlorobenzene	ND	ug/l	2.5					
1,3,5-Trimethylbenzene	ND	ug/l	2.5					
1,2,4-Trimethylbenzene	ND	ug/l	2.5					
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5					
Ethyl ether	ND	ug/l	2.5					
Surrogate Recovery								
1,2-Dichloroethane-d4	96.0	%						
Toluene-d8	97.0	%						
4-Bromofluorobenzene	99.0	%						
Dibromofluoromethane	95.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

boratory Job Number: L0206435

Parameter	% Recovery
Volatile Organics by GC/MS 8260 LCS for sample(s) 03 (WG116804)	
Chlorobenzene	95
Benzene	98
Toluene	96
1,1-Dichloroethene	98
Trichloroethene	102
Surrogate Recovery	
1,2-Dichloroethane-d4	97
Toluene-d8	100
4-Bromofluorobenzene	101
Dibromofluoromethane	101
Volatile Organics by GC/MS 8260 LCS for sample(s) 01-02 (WG117175)	
Chlorobenzene	100
Benzene	103
Toluene	104
1,1-Dichloroethene	100
Trichloroethene	110
Surrogate Recovery	
2-Dichloroethane-d4	99
luene-d8	101
4-Bromofluorobenzene	101
Dibromofluoromethane	100

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0206435

Parameter	MS %	MSD %	RPD
Volatile Organics by GC/MS 8260 for sample(s) 03 (L0206289-04, WG116804)			
Chlorobenzene	97	88	9
Benzene	90	83	8
Toluene	99	92	7
1,1-Dichloroethene	86	80	8
Trichloroethene	85	83	3
Volatile Organics by GC/MS 8260 for sample(s) 01-02 (L0206614-03, WG117175)			
Chlorobenzene	83	82	1
Benzene	86	86	0
Toluene	83	82	1
1,1-Dichloroethene	81	84	4
Trichloroethene	92	94	2

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206435

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 03								
Volatile Organics by GC/MS 8260				1	8260B		0703 10:17	BT
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	0.75					
Chloroform	ND	ug/l	0.75					
Carbon tetrachloride	ND	ug/l	0.50					
1,2-Dichloropropane	ND	ug/l	1.8					
Dibromochloromethane	ND	ug/l	0.50					
1,1,2-Trichloroethane	ND	ug/l	0.75					
Tetrachloroethene	ND	ug/l	0.50					
Chlorobenzene	ND	ug/l	0.50					
Trichlorofluoromethane	ND	ug/l	2.5					
1,2-Dichloroethane	ND	ug/l	0.50					
1,1,1-Trichloroethane	ND	ug/l	0.50					
Bromodichloromethane	ND	ug/l	0.50					
trans-1,3-Dichloropropene	ND	ug/l	0.50					
cis-1,3-Dichloropropene	ND	ug/l	0.50					
1,1-Dichloropropene	ND	ug/l	2.5					
Bromoform	ND	ug/l	0.50					
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50					
Benzene	ND	ug/l	0.50					
Toluene	ND	ug/l	0.75					
Ethylbenzene	ND	ug/l	0.50					
Chloromethane	ND	ug/l	2.5					
Bromomethane	ND	ug/l	1.0					
Vinyl chloride	ND	ug/l	1.0					
Chloroethane	ND	ug/l	1.0					
1,1-Dichloroethene	ND	ug/l	0.50					
trans-1,2-Dichloroethene	ND	ug/l	0.75					
Trichloroethene	ND	ug/l	0.50					
1,2-Dichlorobenzene	ND	ug/l	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l	2.5					
Methyl tert butyl ether	ND	ug/l	1.0					
p/m-Xylene	ND	ug/l	0.50					
o-Xylene	ND	ug/l	0.50					
cis-1,2-Dichloroethene	ND	ug/l	0.50					
Dibromomethane	ND	ug/l	5.0					
1,4-Dichlorobutane	ND	ug/l	5.0					
Iodomethane	ND	ug/l	5.0					
1,2,3-Trichloropropane	ND	ug/l	5.0					
Styrene	ND	ug/l	0.50					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/l	5.0					
4-Methyl-2-pentanone	ND	ug/l	5.0					
-Hexanone	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206435

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Blank Analysis for sample(s) 03								
Volatile Organics by GC/MS 8260 continued				1	8260B		0703 10:17	BT
Ethyl methacrylate	ND	ug/l	5.0					
Acrolein	ND	ug/l	12.					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/l	2.5					
1,2-Dibromoethane	ND	ug/l	2.5					
1,3-Dichloropropane	ND	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50					
Bromobenzene	ND	ug/l	2.5					
n-Butylbenzene	ND	ug/l	0.50					
sec-Butylbenzene	ND	ug/l	0.50					
tert-Butylbenzene	ND	ug/l	2.5					
o-Chlorotoluene	ND	ug/l	2.5					
p-Chlorotoluene	ND	ug/l	2.5					
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5					
Hexachlorobutadiene	ND	ug/l	2.5					
Isopropylbenzene	ND	ug/l	0.50					
p-Isopropyltoluene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	2.5					
n-Propylbenzene	ND	ug/l	0.50					
1,2,3-Trichlorobenzene	ND	ug/l	2.5					
1,2,4-Trichlorobenzene	ND	ug/l	2.5					
1,3,5-Trimethylbenzene	ND	ug/l	2.5					
1,2,4-Trimethylbenzene	ND	ug/l	2.5					
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5					
Ethyl ether	ND	ug/l	2.5					
Surrogate Recovery								
1,2-Dichloroethane-d4	103.	%						
Toluene-d8	100.	%						
4-Bromofluorobenzene	102.	%						
Dibromofluoromethane	100.	%						
Blank Analysis for sample(s) 01-02								
Volatile Organics by GC/MS 8260				1	8260B		0711 10:49	RY
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	0.75					
Chloroform	ND	ug/l	0.75					
Carbon tetrachloride	ND	ug/l	0.50					
1,2-Dichloropropane	ND	ug/l	1.8					
Dibromochloromethane	ND	ug/l	0.50					
1,1,2-Trichloroethane	ND	ug/l	0.75					
Tetrachloroethene	ND	ug/l	0.50					
Chlorobenzene	ND	ug/l	0.50					
Trichlorofluoromethane	ND	ug/l	2.5					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206435

Continued

Blank Analysis for sample(s) 01-02

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 8260 continued				1	8260B		0711 10:49	RY
1,2-Dichloroethane	ND	ug/l	0.50					
1,1,1-Trichloroethane	ND	ug/l	0.50					
Bromodichloromethane	ND	ug/l	0.50					
trans-1,3-Dichloropropene	ND	ug/l	0.50					
cis-1,3-Dichloropropene	ND	ug/l	0.50					
1,1-Dichloropropene	ND	ug/l	2.5					
Bromoform	ND	ug/l	0.50					
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50					
Benzene	ND	ug/l	0.50					
Toluene	ND	ug/l	0.75					
Ethylbenzene	ND	ug/l	0.50					
Chloromethane	ND	ug/l	2.5					
Bromomethane	ND	ug/l	1.0					
Vinyl chloride	ND	ug/l	1.0					
Chloroethane	ND	ug/l	1.0					
1,1-Dichloroethene	ND	ug/l	0.50					
trans-1,2-Dichloroethene	ND	ug/l	0.75					
Trichloroethene	ND	ug/l	0.50					
2-Dichlorobenzene	ND	ug/l	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l	2.5					
Methyl tert butyl ether	ND	ug/l	1.0					
p/m-Xylene	ND	ug/l	0.50					
o-Xylene	ND	ug/l	0.50					
cis-1,2-Dichloroethene	ND	ug/l	0.50					
Dibromomethane	ND	ug/l	5.0					
1,4-Dichlorobutane	ND	ug/l	5.0					
Iodomethane	ND	ug/l	5.0					
1,2,3-Trichloropropane	ND	ug/l	5.0					
Styrene	ND	ug/l	0.50					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/l	5.0					
4-Methyl-2-pentanone	ND	ug/l	5.0					
2-Hexanone	ND	ug/l	5.0					
Ethyl methacrylate	ND	ug/l	5.0					
Acrolein	ND	ug/l	12.					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/l	2.5					
1,2-Dibromoethane	ND	ug/l	2.5					
1,3-Dichloropropane	ND	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50					
romobenzene	ND	ug/l	2.5					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206435

Continued

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Blank Analysis for sample(s) 01-02							
Volatile Organics by GC/MS 8260 continued				1 8260B		0711 10:49	RY
n-Butylbenzene	ND	ug/l	0.50				
sec-Butylbenzene	ND	ug/l	0.50				
tert-Butylbenzene	ND	ug/l	2.5				
o-Chlorotoluene	ND	ug/l	2.5				
p-Chlorotoluene	ND	ug/l	2.5				
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5				
Hexachlorobutadiene	ND	ug/l	2.5				
Isopropylbenzene	ND	ug/l	0.50				
p-Isopropyltoluene	ND	ug/l	0.50				
Naphthalene	ND	ug/l	2.5				
n-Propylbenzene	ND	ug/l	0.50				
1,2,3-Trichlorobenzene	ND	ug/l	2.5				
1,2,4-Trichlorobenzene	ND	ug/l	2.5				
1,3,5-Trimethylbenzene	ND	ug/l	2.5				
1,2,4-Trimethylbenzene	ND	ug/l	2.5				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
Surrogate Recovery							
1,2-Dichloroethane-d4	107.	%					
Toluene-d8	109.	%					
4-Bromofluorobenzene	121.	%					
Dibromofluoromethane	103.	%					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Update III, 1997.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.

Please note that all solid samples are reported on dry weight basis unless noted otherwise.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample olume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

attachment 1

Quality Control Acceptance Criteria

Volatile Organics by Method 8260B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
1,2-Dichloroethane-d_4	75%	125%	75%	125%
4-Bromofluorobenzene	75%	125%	75%	125%
Toluene-d_8	75%	125%	75%	125%
Dibromofluoromethane	75%	125%	75%	125%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	61%	145%	59%	172%	all target compounds	
Trichloroethene	71%	120%	62%	137%	20%	30%
Chlorobenzene	75%	130%	60%	133%		
Benzene	76%	127%	66%	142%		
Toluene	76%	125%	59%	139%		

Volatile Organics by Method 8021B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
4-Bromochlorobenzene	70%	110%	70%	120%
4-Bromofluorobenzene	70%	110%	70%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	70%	130%	70%	130%	all target compounds	
Trichloroethene	70%	130%	70%	130%	20%	30%
Chlorobenzene	70%	130%	70%	130%		
Benzene	70%	130%	70%	130%		
Toluene	70%	130%	70%	130%		
Ethylbenzene	70%	130%	70%	130%		

Semi-Volatile Organics by Method 8270C (includes PAHs)

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
Nitrobenzene-d_5	23%	120%	23%	120%
Phenol-d_6	10%	120%	10%	120%
2-Fluorophenol	21%	120%	25%	120%
2-Fluorobiphenyl	43%	120%	30%	120%
p-Terphenyl-d_{14}	33%	120%	18%	120%
2,4,6-Tribromophenol	10%	120%	19%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,2,4-Trichlorobenzene	39%	98%	38%	107%	all target compounds	
Acenaphthene	46%	118%	31%	137%	40%	50%
2,4-Dinitrotoluene	24%	96%	28%	89%		
Pyrene	26%	127%	35%	142%		
N-Nitroso-di-n-propylamine	41%	116%	41%	126%		
1,4-Dichlorobenzene	36%	97%	28%	104%		
Pentachlorophenol	9%	103%	17%	109%		
Phenol	12%	110%	26%	90%		
2-Chlorophenol	27%	123%	25%	102%		
4-Chloro-3-methylphenol	23%	97%	26%	103%		
4-Nitrophenol	10%	80%	11%	114%		

attachment 1

Quality Control Acceptance Criteria

PCB/Pesticides by Method 8082/8081

surrogate spike % recovery	AQ Limits		Soil Limits			
	LCL	UCL	LCL	UCL		
2,4,5,6-Tetrachloro-m-xylene	40%	120%	40%	120%		
Decachlorobiphenyl	40%	120%	40%	120%		
matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
Lindane	56%	123%	46%	127%	all target compounds	
Heptachlor	40%	131%	35%	130%	30%	50%
Aldrin	40%	120%	34%	132%		
Dieldrin	52%	126%	31%	134%		
Endrin	56%	121%	42%	139%		
4,4'-DDT	38%	127%	23%	134%		
Aroclor 1242/1016	40%	140%	40%	140%		
Aroclor 1260	40%	140%	40%	140%		

Volatile Petroleum Hydrocarbons (VPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits			
	LCL	UCL	LCL	UCL		
2,5-Dibromotoluene	70%	130%	70%	130%		
	percent recovery				duplicate	
laboratory control sample (LCS)	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	70%	130%	70%	130%	50%	50%

Extractable Petroleum Hydrocarbons (EPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits			
	LCL	UCL	LCL	UCL		
Chloro-octadecane	40%	140%	40%	140%		
ortho-Terphenyl	40%	140%	40%	140%		
2-Fluorobiphenyl (fractionation)	40%	140%	40%	140%		
2-Bromonaphthalene (fractionation)	40%	140%	40%	140%		
	percent recovery				duplicate	
laboratory control sample (LCS)	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	40%	140%	40%	140%	50%	50%

TPH (GC-FID) by Method 8100M

					duplicate	
surrogate spike % recovery	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
ortho-Terphenyl	40%	140%	40%	140%	40%	40%

TPH by Method 418.1

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
TPH	60%	140%	60%	140%	40%	40%

attachment 1

Quality Control Acceptance Criteria

Trace Metals by Method 6010B/7000 series

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
target analyte	75%	125%	70%	140%	20%	35%

Mercury by Method 7470A/7471A

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
mercury	70%	130%	60%	140%	35%	45%

Total Cyanide by Method 9010B

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
cyanide	80%	120%	65%	135%	30%	40%

Total Phenol by Method 9065

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
phenol	70%	130%	65%	135%	20%	30%

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: [illegible]

ALPHA Job #: [illegible]

ALPHA

Eight Walkup Drive Westborough, MA 01581
TEL: 508-898-9220 FAX: 508-898-9193

Client Information

Client: Sanborn Head & Assoc.
Address: 239 Littleton Rd Suite
Westford MA 0886
Phone: 978 392 0900
Fax: 978 392 0987
Email:

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 2170
Project Location: Somerville MA
Project #: 2170
Project Manager: Duncan Wood
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due: 07/11/02 Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info
PO #:

Regulatory Requirements/Report Limits

State /Fed	Program	Criteria

Other Project Specific Requirements/Comments:

RLs = MCP Method 1 GW-2 & GW-3

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS: VOC 8260

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC 8260	Sample Specific Comments	TOTAL # BOTTLES
L0206435 1	MW 1	7/1/02	1145	GW	MBR	2		2
	MW 3	7/1/02	1200	GW	MBR	2		2
	Trip Blank					1		1

Shaded Gray Areas For Lab Use Only

Container Type	V
Preservative	B

Relinquished By:	Date/Time	Received By:	Date/Time
			7/2/02 1040
			07/02/12 13:5

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

Form No: 02-02 STD

RECEIVED JUL 1 6 2002

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Sanborn, Head & Associates, Inc.

Address: 239 Littleton Road
Suite 1C
Westford, MA 01886

Attn: Mr. Duncan Wood

Project Number: 2170

Site: 2170

Laboratory Job Number: L0206516

Invoice Number: 65601

Date Received: 03-JUL-02

Date Reported: 12-JUL-02

Delivery Method: Client

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0206516-01	SH MW1 S3	SOMERVILLE, MA
L0206516-02	SH MW2 S4	SOMERVILLE, MA
L0206516-03	SH MW3 S4	SOMERVILLE, MA
L0206516-04	TRIP BLANK	ALPHA

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by: Scott McLean

Scott McLean - Technical Director
This document electronically signed

Laboratory Job Number: L0206516

Alpha Report L0206516:

Volatile Organics

It should be noted that the analysis of Volatile Organics by EPA Method 8260B/5035 Low Level could not be performed on Alpha Sample L0206516-02 due to the high concentrations of target and/or non-target compounds present in the sample.

Alpha Sample L0206516-02 has elevated limits of detection due to the dilutions required by the elevated concentrations of target compounds in the sample.

One of the surrogate percent recoveries on Alpha Sample L0206516-04 is above the acceptance criteria for the method. The sample is non-detect for all target compounds, therefore no further action was taken.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206516-01
SH MW1 S3
Sample Matrix: SOIL

Condition of Sample: Satisfactory

Number & Type of Containers: 1-Plastic,3-Vial

Date Collected: 03-JUL-2002 09:00
Date Received : 03-JUL-2002
Date Reported : 12-JUL-2002

Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Solids, Total	93.	%	0.10	30 2540G		0708 12:10	SD
Volatile Organics 8260 via Low 5035				1 8260B		0712 01:27	BT
Methylene chloride	ND	ug/kg	7.4				
1,1-Dichloroethane	ND	ug/kg	1.1				
Chloroform	ND	ug/kg	1.1				
Carbon tetrachloride	ND	ug/kg	0.74				
1,2-Dichloropropane	ND	ug/kg	2.6				
Dibromochloromethane	ND	ug/kg	0.74				
1,1,2-Trichloroethane	ND	ug/kg	1.1				
Tetrachloroethene	10.	ug/kg	0.74				
Chlorobenzene	ND	ug/kg	0.74				
Trichlorofluoromethane	ND	ug/kg	3.7				
1,2-Dichloroethane	ND	ug/kg	0.74				
1,1,1-Trichloroethane	ND	ug/kg	0.74				
Bromodichloromethane	ND	ug/kg	0.74				
trans-1,3-Dichloropropene	ND	ug/kg	0.74				
cis-1,3-Dichloropropene	ND	ug/kg	0.74				
1,1-Dichloropropene	ND	ug/kg	3.7				
Bromoform	ND	ug/kg	0.74				
1,1,2,2-Tetrachloroethane	ND	ug/kg	0.74				
Benzene	ND	ug/kg	0.74				
Toluene	3.7	ug/kg	1.1				
Ethylbenzene	ND	ug/kg	0.74				
Chloromethane	ND	ug/kg	3.7				
Bromomethane	ND	ug/kg	1.5				
Vinyl chloride	ND	ug/kg	1.5				
Chloroethane	ND	ug/kg	1.5				
1,1-Dichloroethene	ND	ug/kg	0.74				
trans-1,2-Dichloroethene	ND	ug/kg	1.1				
Trichloroethene	ND	ug/kg	0.74				
1,2-Dichlorobenzene	ND	ug/kg	3.7				
1,3-Dichlorobenzene	ND	ug/kg	3.7				
1,4-Dichlorobenzene	ND	ug/kg	3.7				
Methyl tert butyl ether	ND	ug/kg	1.5				
p/m-Xylene	ND	ug/kg	0.74				
o-Xylene	ND	ug/kg	0.74				
cis-1,2-Dichloroethene	ND	ug/kg	0.74				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206516-01
SH MW1 S3

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics 8260 via Low 5035 continued				1 8260B		0712 01:27	BT
Dibromomethane	ND	ug/kg	7.4				
1,4-Dichlorobutane	ND	ug/kg	7.4				
Iodomethane	ND	ug/kg	7.4				
1,2,3-Trichloropropane	ND	ug/kg	7.4				
Styrene	ND	ug/kg	0.74				
Dichlorodifluoromethane	ND	ug/kg	7.4				
Acetone	ND	ug/kg	7.4				
Carbon disulfide	ND	ug/kg	7.4				
2-Butanone	ND	ug/kg	7.4				
Vinyl acetate	ND	ug/kg	7.4				
4-Methyl-2-pentanone	ND	ug/kg	7.4				
2-Hexanone	ND	ug/kg	7.4				
Ethyl methacrylate	ND	ug/kg	7.4				
Acrolein	ND	ug/kg	18.				
Acrylonitrile	ND	ug/kg	7.4				
Bromochloromethane	ND	ug/kg	3.7				
Tetrahydrofuran	ND	ug/kg	15.				
2,2-Dichloropropane	ND	ug/kg	3.7				
1,2-Dibromoethane	ND	ug/kg	3.7				
1,3-Dichloropropane	ND	ug/kg	3.7				
1,1,1,2-Tetrachloroethane	ND	ug/kg	0.74				
Bromobenzene	ND	ug/kg	3.7				
n-Butylbenzene	ND	ug/kg	0.74				
sec-Butylbenzene	ND	ug/kg	0.74				
tert-Butylbenzene	ND	ug/kg	3.7				
o-Chlorotoluene	ND	ug/kg	3.7				
p-Chlorotoluene	ND	ug/kg	3.7				
1,2-Dibromo-3-chloropropane	ND	ug/kg	3.7				
Hexachlorobutadiene	ND	ug/kg	3.7				
Isopropylbenzene	ND	ug/kg	0.74				
p-Isopropyltoluene	ND	ug/kg	0.74				
Naphthalene	ND	ug/kg	3.7				
n-Propylbenzene	ND	ug/kg	0.74				
1,2,3-Trichlorobenzene	ND	ug/kg	3.7				
1,2,4-Trichlorobenzene	ND	ug/kg	3.7				
1,3,5-Trimethylbenzene	ND	ug/kg	3.7				
1,2,4-Trimethylbenzene	ND	ug/kg	3.7				
trans-1,4-Dichloro-2-butene	ND	ug/kg	3.7				
Ethyl ether	ND	ug/kg	3.7				
Surrogate Recovery							
1,2-Dichloroethane-d4	129.	%					
Toluene-d8	93.0	%					
4-Bromofluorobenzene	94.0	%					
Dibromofluoromethane	122.	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206516-02
SH MW2 S4
Sample Matrix: SOIL

Condition of Sample: Satisfactory

Number & Type of Containers: 1-Plastic,3-Vial

Date Collected: 03-JUL-2002 13:30
Date Received : 03-JUL-2002
Date Reported : 12-JUL-2002

Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Solids, Total	90.	%	0.10	30 2540G		0708 12:10	SD
Volatile Organics 8260 via High 5035				1 8260B		0711 23:50	AR
Methylene chloride	ND	ug/kg	1000				
1,1-Dichloroethane	ND	ug/kg	160				
Chloroform	ND	ug/kg	160				
Carbon tetrachloride	ND	ug/kg	100				
1,2-Dichloropropane	ND	ug/kg	370				
Dibromochloromethane	ND	ug/kg	100				
1,1,2-Trichloroethane	ND	ug/kg	160				
etrachloroethene	23000	ug/kg	100				
Chlorobenzene	ND	ug/kg	100				
Trichlorofluoromethane	ND	ug/kg	520				
1,2-Dichloroethane	ND	ug/kg	100				
1,1,1-Trichloroethane	240	ug/kg	100				
Bromodichloromethane	ND	ug/kg	100				
trans-1,3-Dichloropropene	ND	ug/kg	100				
cis-1,3-Dichloropropene	ND	ug/kg	100				
1,1-Dichloropropene	ND	ug/kg	520				
Bromoform	ND	ug/kg	100				
1,1,2,2-Tetrachloroethane	ND	ug/kg	100				
Benzene	ND	ug/kg	100				
Toluene	ND	ug/kg	160				
Ethylbenzene	ND	ug/kg	100				
Chloromethane	ND	ug/kg	520				
Bromomethane	ND	ug/kg	210				
Vinyl chloride	ND	ug/kg	210				
Chloroethane	ND	ug/kg	210				
1,1-Dichloroethene	ND	ug/kg	100				
trans-1,2-Dichloroethene	ND	ug/kg	160				
Trichloroethene	320	ug/kg	100				
1,2-Dichlorobenzene	ND	ug/kg	520				
1,3-Dichlorobenzene	ND	ug/kg	520				
1,4-Dichlorobenzene	ND	ug/kg	520				
Methyl tert butyl ether	ND	ug/kg	210				
p/m-Xylene	ND	ug/kg	100				
o-Xylene	ND	ug/kg	100				
cis-1,2-Dichloroethene	ND	ug/kg	100				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206516-02
SH MW2 S4

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics 8260 via High 5035 continued				1 8260B		0711 23:50	AR
Dibromomethane	ND	ug/kg	1000				
1,4-Dichlorobutane	ND	ug/kg	1000				
Iodomethane	ND	ug/kg	1000				
1,2,3-Trichloropropane	ND	ug/kg	1000				
Styrene	ND	ug/kg	100				
Dichlorodifluoromethane	ND	ug/kg	1000				
Acetone	ND	ug/kg	1000				
Carbon disulfide	ND	ug/kg	1000				
2-Butanone	ND	ug/kg	1000				
Vinyl acetate	ND	ug/kg	1000				
4-Methyl-2-pentanone	ND	ug/kg	1000				
2-Hexanone	ND	ug/kg	1000				
Ethyl methacrylate	ND	ug/kg	1000				
Acrolein	ND	ug/kg	2600				
Acrylonitrile	ND	ug/kg	1000				
Bromochloromethane	ND	ug/kg	520				
Tetrahydrofuran	ND	ug/kg	2100				
2,2-Dichloropropane	ND	ug/kg	520				
1,2-Dibromoethane	ND	ug/kg	520				
1,3-Dichloropropane	ND	ug/kg	520				
1,1,1,2-Tetrachloroethane	ND	ug/kg	100				
Bromobenzene	ND	ug/kg	520				
n-Butylbenzene	ND	ug/kg	100				
sec-Butylbenzene	ND	ug/kg	100				
tert-Butylbenzene	ND	ug/kg	520				
o-Chlorotoluene	ND	ug/kg	520				
p-Chlorotoluene	ND	ug/kg	520				
1,2-Dibromo-3-chloropropane	ND	ug/kg	520				
Hexachlorobutadiene	ND	ug/kg	520				
Isopropylbenzene	ND	ug/kg	100				
p-Isopropyltoluene	ND	ug/kg	100				
Naphthalene	ND	ug/kg	520				
n-Propylbenzene	ND	ug/kg	100				
1,2,3-Trichlorobenzene	ND	ug/kg	520				
1,2,4-Trichlorobenzene	ND	ug/kg	520				
1,3,5-Trimethylbenzene	ND	ug/kg	520				
1,2,4-Trimethylbenzene	ND	ug/kg	520				
trans-1,4-Dichloro-2-butene	ND	ug/kg	520				
Ethyl ether	ND	ug/kg	520				
Surrogate Recovery							
1,2-Dichloroethane-d4	100.	%					
Toluene-d8	98.0	%					
4-Bromofluorobenzene	101.	%					
Dibromofluoromethane	95.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L0206516-03 SH MW3 S4	**Date Collected:**	03-JUL-2002 15:30
		Date Received :	03-JUL-2002
Sample Matrix:	SOIL	**Date Reported :**	12-JUL-2002
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 1-Plastic,3-Vial

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Solids, Total	90.	%	0.10	30 2540G		0708 12:10	SD
Volatile Organics 8260 via Low 5035				1 8260B		0712 02:11	BT
Methylene chloride	ND	ug/kg	8.8				
1,1-Dichloroethane	ND	ug/kg	1.3				
Chloroform	ND	ug/kg	1.3				
Carbon tetrachloride	ND	ug/kg	0.88				
1,2-Dichloropropane	ND	ug/kg	3.1				
Dibromochloromethane	ND	ug/kg	0.88				
1,1,2-Trichloroethane	ND	ug/kg	1.3				
Tetrachloroethene	160	ug/kg	0.88				
Chlorobenzene	ND	ug/kg	0.88				
Trichlorofluoromethane	ND	ug/kg	4.4				
1,2-Dichloroethane	ND	ug/kg	0.88				
1,1,1-Trichloroethane	9.1	ug/kg	0.88				
Bromodichloromethane	ND	ug/kg	0.88				
trans-1,3-Dichloropropene	ND	ug/kg	0.88				
cis-1,3-Dichloropropene	ND	ug/kg	0.88				
1,1-Dichloropropene	ND	ug/kg	4.4				
Bromoform	ND	ug/kg	3.0				
1,1,2,2-Tetrachloroethane	ND	ug/kg	0.88				
Benzene	ND	ug/kg	0.88				
Toluene	ND	ug/kg	1.3				
Ethylbenzene	ND	ug/kg	0.88				
Chloromethane	ND	ug/kg	4.4				
Bromomethane	ND	ug/kg	1.8				
Vinyl chloride	ND	ug/kg	1.8				
Chloroethane	ND	ug/kg	1.8				
1,1-Dichloroethene	ND	ug/kg	0.88				
trans-1,2-Dichloroethene	ND	ug/kg	1.3				
Trichloroethene	6.2	ug/kg	0.88				
1,2-Dichlorobenzene	ND	ug/kg	4.4				
1,3-Dichlorobenzene	ND	ug/kg	4.4				
1,4-Dichlorobenzene	ND	ug/kg	4.4				
Methyl tert butyl ether	ND	ug/kg	1.8				
p/m-Xylene	ND	ug/kg	0.88				
o-Xylene	ND	ug/kg	0.88				
cis-1,2-Dichloroethene	ND	ug/kg	0.88				

Comments: Complete list of References and Glossary of Terms found in Addendum I

Laboratory Sample Number: L0206516-03
SH MW3 S4

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics 8260 via Low 5035 continued				1	8260B		0712 02:11	BT
Dibromomethane	ND	ug/kg	8.8					
1,4-Dichlorobutane	ND	ug/kg	8.8					
Iodomethane	ND	ug/kg	8.8					
1,2,3-Trichloropropane	ND	ug/kg	8.8					
Styrene	ND	ug/kg	0.88					
Dichlorodifluoromethane	ND	ug/kg	8.8					
Acetone	ND	ug/kg	8.8					
Carbon disulfide	ND	ug/kg	8.8					
2-Butanone	ND	ug/kg	8.8					
Vinyl acetate	ND	ug/kg	8.8					
4-Methyl-2-pentanone	ND	ug/kg	8.8					
2-Hexanone	ND	ug/kg	8.8					
Ethyl methacrylate	ND	ug/kg	8.8					
Acrolein	ND	ug/kg	22.					
Acrylonitrile	ND	ug/kg	8.8					
Bromochloromethane	ND	ug/kg	4.4					
Tetrahydrofuran	ND	ug/kg	18.					
2,2-Dichloropropane	ND	ug/kg	4.4					
1,2-Dibromoethane	ND	ug/kg	4.4					
1,3-Dichloropropane	ND	ug/kg	4.4					
1,1,1,2-Tetrachloroethane	ND	ug/kg	0.88					
Bromobenzene	ND	ug/kg	4.4					
n-Butylbenzene	ND	ug/kg	0.88					
sec-Butylbenzene	ND	ug/kg	0.88					
tert-Butylbenzene	ND	ug/kg	4.4					
o-Chlorotoluene	ND	ug/kg	4.4					
p-Chlorotoluene	ND	ug/kg	4.4					
1,2-Dibromo-3-chloropropane	ND	ug/kg	4.4					
Hexachlorobutadiene	ND	ug/kg	4.4					
Isopropylbenzene	ND	ug/kg	0.88					
p-Isopropyltoluene	ND	ug/kg	0.88					
Naphthalene	ND	ug/kg	4.4					
n-Propylbenzene	ND	ug/kg	0.88					
1,2,3-Trichlorobenzene	ND	ug/kg	4.4					
1,2,4-Trichlorobenzene	ND	ug/kg	4.4					
1,3,5-Trimethylbenzene	ND	ug/kg	4.4					
1,2,4-Trimethylbenzene	ND	ug/kg	4.4					
trans-1,4-Dichloro-2-butene	ND	ug/kg	4.4					
Ethyl ether	ND	ug/kg	4.4					
Surrogate Recovery								
1,2-Dichloroethane-d4	128.	%						
Toluene-d8	88.0	%						
4-Bromofluorobenzene	92.0	%						
Dibromofluoromethane	120.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number:	L0206516-04 TRIP BLANK	**Date Collected:**	02-JUL-2002 14:50
		Date Received :	03-JUL-2002
Sample Matrix:	SOIL	**Date Reported :**	12-JUL-2002
Condition of Sample:	Satisfactory	**Field Prep:**	None

Number & Type of Containers: 2-Vial

Comments:
Results are reported on an 'AS RECEIVED' basis.

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via Low 5035				1	8260B		0712 00:42	BT
Methylene chloride	ND	ug/kg	10.					
1,1-Dichloroethane	ND	ug/kg	1.5					
Chloroform	ND	ug/kg	1.5					
Carbon tetrachloride	ND	ug/kg	1.0					
1,2-Dichloropropane	ND	ug/kg	3.5					
Dibromochloromethane	ND	ug/kg	1.0					
1,2-Trichloroethane	ND	ug/kg	1.5					
etrachloroethene	ND	ug/kg	1.0					
Chlorobenzene	ND	ug/kg	1.0					
Trichlorofluoromethane	ND	ug/kg	5.0					
1,2-Dichloroethane	ND	ug/kg	1.0					
1,1,1-Trichloroethane	ND	ug/kg	1.0					
Bromodichloromethane	ND	ug/kg	1.0					
trans-1,3-Dichloropropene	ND	ug/kg	1.0					
cis-1,3-Dichloropropene	ND	ug/kg	1.0					
1,1-Dichloropropene	ND	ug/kg	5.0					
Bromoform	ND	ug/kg	4.0					
1,1,2,2-Tetrachloroethane	ND	ug/kg	1.0					
Benzene	ND	ug/kg	1.0					
Toluene	ND	ug/kg	1.5					
Ethylbenzene	ND	ug/kg	1.0					
Chloromethane	ND	ug/kg	5.0					
Bromomethane	ND	ug/kg	2.0					
Vinyl chloride	ND	ug/kg	2.0					
Chloroethane	ND	ug/kg	2.0					
1,1-Dichloroethene	ND	ug/kg	1.0					
trans-1,2-Dichloroethene	ND	ug/kg	1.5					
Trichloroethene	ND	ug/kg	1.0					
1,2-Dichlorobenzene	ND	ug/kg	5.0					
1,3-Dichlorobenzene	ND	ug/kg	5.0					
1,4-Dichlorobenzene	ND	ug/kg	5.0					
Methyl tert butyl ether	ND	ug/kg	2.0					
p/m-Xylene	ND	ug/kg	1.0					
o-Xylene	ND	ug/kg	1.0					
is-1,2-Dichloroethene	ND	ug/kg	1.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206516-04
TRIP BLANK

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via Low 5035 continued				1	8260B		0712 00:42	BT
Dibromomethane	ND	ug/kg	10.					
1,4-Dichlorobutane	ND	ug/kg	10.					
Iodomethane	ND	ug/kg	10.					
1,2,3-Trichloropropane	ND	ug/kg	10.					
Styrene	ND	ug/kg	1.0					
Dichlorodifluoromethane	ND	ug/kg	10.					
Acetone	ND	ug/kg	10.					
Carbon disulfide	ND	ug/kg	10.					
2-Butanone	ND	ug/kg	10.					
Vinyl acetate	ND	ug/kg	10.					
4-Methyl-2-pentanone	ND	ug/kg	10.					
2-Hexanone	ND	ug/kg	10.					
Ethyl methacrylate	ND	ug/kg	10.					
Acrolein	ND	ug/kg	25.					
Acrylonitrile	ND	ug/kg	10.					
Bromochloromethane	ND	ug/kg	5.0					
Tetrahydrofuran	ND	ug/kg	20.					
2,2-Dichloropropane	ND	ug/kg	5.0					
1,2-Dibromoethane	ND	ug/kg	5.0					
1,3-Dichloropropane	ND	ug/kg	5.0					
1,1,1,2-Tetrachloroethane	ND	ug/kg	1.0					
Bromobenzene	ND	ug/kg	5.0					
n-Butylbenzene	ND	ug/kg	1.0					
sec-Butylbenzene	ND	ug/kg	1.0					
tert-Butylbenzene	ND	ug/kg	5.0					
o-Chlorotoluene	ND	ug/kg	5.0					
p-Chlorotoluene	ND	ug/kg	5.0					
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0					
Hexachlorobutadiene	ND	ug/kg	5.0					
Isopropylbenzene	ND	ug/kg	1.0					
p-Isopropyltoluene	ND	ug/kg	1.0					
Naphthalene	ND	ug/kg	5.0					
n-Propylbenzene	ND	ug/kg	1.0					
1,2,3-Trichlorobenzene	ND	ug/kg	5.0					
1,2,4-Trichlorobenzene	ND	ug/kg	5.0					
1,3,5-Trimethylbenzene	ND	ug/kg	5.0					
1,2,4-Trimethylbenzene	ND	ug/kg	5.0					
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.0					
Ethyl ether	ND	ug/kg	5.0					
Surrogate Recovery								
1,2-Dichloroethane-d4	127.	%						
Toluene-d8	92.0	%						
4-Bromofluorobenzene	99.0	%						
Dibromofluoromethane	120.	%						
Volatile Organics 8260 via High 5035				1	8260B		0711 22:29	R
Methylene chloride	ND	ug/kg	500					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

aboratory Sample Number: L0206516-04
TRIP BLANK

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1	8260B		0711 22:29	AR
1,1-Dichloroethane	ND	ug/kg	75.					
Chloroform	ND	ug/kg	75.					
Carbon tetrachloride	ND	ug/kg	50.					
1,2-Dichloropropane	ND	ug/kg	180					
Dibromochloromethane	ND	ug/kg	50.					
1,1,2-Trichloroethane	ND	ug/kg	75.					
Tetrachloroethene	ND	ug/kg	50.					
Chlorobenzene	ND	ug/kg	50.					
Trichlorofluoromethane	ND	ug/kg	250					
1,2-Dichloroethane	ND	ug/kg	50.					
1,1,1-Trichloroethane	ND	ug/kg	50.					
Bromodichloromethane	ND	ug/kg	50.					
trans-1,3-Dichloropropene	ND	ug/kg	50.					
cis-1,3-Dichloropropene	ND	ug/kg	50.					
1,1-Dichloropropene	ND	ug/kg	250					
Bromoform	ND	ug/kg	50.					
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.					
Benzene	ND	ug/kg	50.					
Toluene	ND	ug/kg	75.					
Ethylbenzene	ND	ug/kg	50.					
hloromethane	ND	ug/kg	250					
Bromomethane	ND	ug/kg	100					
Vinyl chloride	ND	ug/kg	100					
Chloroethane	ND	ug/kg	100					
1,1-Dichloroethene	ND	ug/kg	50.					
trans-1,2-Dichloroethene	ND	ug/kg	75.					
Trichloroethene	ND	ug/kg	50.					
1,2-Dichlorobenzene	ND	ug/kg	250					
1,3-Dichlorobenzene	ND	ug/kg	250					
1,4-Dichlorobenzene	ND	ug/kg	250					
Methyl tert butyl ether	ND	ug/kg	100					
p/m-Xylene	ND	ug/kg	50.					
o-Xylene	ND	ug/kg	50.					
cis-1,2-Dichloroethene	ND	ug/kg	50.					
Dibromomethane	ND	ug/kg	500					
1,4-Dichlorobutane	ND	ug/kg	500					
Iodomethane	ND	ug/kg	500					
1,2,3-Trichloropropane	ND	ug/kg	500					
Styrene	ND	ug/kg	50.					
Dichlorodifluoromethane	ND	ug/kg	500					
Acetone	ND	ug/kg	500					
Carbon disulfide	ND	ug/kg	500					
2-Butanone	ND	ug/kg	500					
Vinyl acetate	ND	ug/kg	500					
4-Methyl-2-pentanone	ND	ug/kg	500					
2-Hexanone	ND	ug/kg	500					
Ethyl methacrylate	ND	ug/kg	500					
Acrolein	ND	ug/kg	1200					
crylonitrile	ND	ug/kg	500					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L0206516-04
TRIP BLANK

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics 8260 via High 5035 continued				1 8260B		0711 22:29	AR
Bromochloromethane	ND	ug/kg	250				
Tetrahydrofuran	ND	ug/kg	1000				
2,2-Dichloropropane	ND	ug/kg	250				
1,2-Dibromoethane	ND	ug/kg	250				
1,3-Dichloropropane	ND	ug/kg	250				
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.				
Bromobenzene	ND	ug/kg	250				
n-Butylbenzene	ND	ug/kg	50.				
sec-Butylbenzene	ND	ug/kg	50.				
tert-Butylbenzene	ND	ug/kg	250				
o-Chlorotoluene	ND	ug/kg	250				
p-Chlorotoluene	ND	ug/kg	250				
1,2-Dibromo-3-chloropropane	ND	ug/kg	250				
Hexachlorobutadiene	ND	ug/kg	250				
Isopropylbenzene	ND	ug/kg	50.				
p-Isopropyltoluene	ND	ug/kg	50.				
Naphthalene	ND	ug/kg	250				
n-Propylbenzene	ND	ug/kg	50.				
1,2,3-Trichlorobenzene	ND	ug/kg	250				
1,2,4-Trichlorobenzene	ND	ug/kg	250				
1,3,5-Trimethylbenzene	ND	ug/kg	250				
1,2,4-Trimethylbenzene	ND	ug/kg	250				
trans-1,4-Dichloro-2-butene	ND	ug/kg	250				
Ethyl ether	ND	ug/kg	250				
Surrogate Recovery							
1,2-Dichloroethane-d4	98.0	%					
Toluene-d8	101.	%					
4-Bromofluorobenzene	100.	%					
Dibromofluoromethane	97.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

aboratory Job Number: L0206516

Parameter	Value 1	Value 2	RPD	Units
Solids, Total for sample(s) 01-03 (L0206496-01, WG116873)				
Solids, Total	85.	85.	0	%
Volatile Organics 8260 via Low 5035 for sample(s) 01,03-04 (L0206505-03, WG117304)				
Methylene chloride	ND	ND	NC	ug/kg
1,1-Dichloroethane	ND	ND	NC	ug/kg
Chloroform	ND	ND	NC	ug/kg
Carbon tetrachloride	ND	ND	NC	ug/kg
1,2-Dichloropropane	ND	ND	NC	ug/kg
Dibromochloromethane	ND	ND	NC	ug/kg
1,1,2-Trichloroethane	ND	ND	NC	ug/kg
Tetrachloroethene	ND	ND	NC	ug/kg
Chlorobenzene	ND	ND	NC	ug/kg
Trichlorofluoromethane	ND	ND	NC	ug/kg
1,2-Dichloroethane	ND	ND	NC	ug/kg
1,1,1-Trichloroethane	ND	ND	NC	ug/kg
Bromodichloromethane	ND	ND	NC	ug/kg
trans-1,3-Dichloropropene	ND	ND	NC	ug/kg
cis-1,3-Dichloropropene	ND	ND	NC	ug/kg
1,1-Dichloropropene	ND	ND	NC	ug/kg
Bromoform	ND	ND	NC	ug/kg
1,1,2,2-Tetrachloroethane	ND	ND	NC	ug/kg
enzene	ND	ND	NC	ug/kg
Toluene	ND	ND	NC	ug/kg
Ethylbenzene	ND	ND	NC	ug/kg
Chloromethane	ND	ND	NC	ug/kg
Bromomethane	ND	ND	NC	ug/kg
Vinyl chloride	ND	ND	NC	ug/kg
Chloroethane	ND	ND	NC	ug/kg
1,1-Dichloroethene	ND	ND	NC	ug/kg
trans-1,2-Dichloroethene	ND	ND	NC	ug/kg
Trichloroethene	ND	ND	NC	ug/kg
1,2-Dichlorobenzene	ND	ND	NC	ug/kg
1,3-Dichlorobenzene	ND	ND	NC	ug/kg
1,4-Dichlorobenzene	ND	ND	NC	ug/kg
Methyl tert butyl ether	ND	ND	NC	ug/kg
p/m-Xylene	ND	ND	NC	ug/kg
o-Xylene	ND	ND	NC	ug/kg
cis-1,2-Dichloroethene	ND	ND	NC	ug/kg
Dibromomethane	ND	ND	NC	ug/kg
1,4-Dichlorobutane	ND	ND	NC	ug/kg
Iodomethane	ND	ND	NC	ug/kg
1,2,3-Trichloropropane	ND	ND	NC	ug/kg
Styrene	ND	ND	NC	ug/kg
Dichlorodifluoromethane	ND	ND	NC	ug/kg
Acetone	45.	46.	2	ug/kg
Carbon disulfide	ND	ND	NC	ug/kg
2-Butanone	ND	ND	NC	ug/kg
Vinyl acetate	ND	ND	NC	ug/kg

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L0206516

Continued

Parameter	Value 1	Value 2	RPD	Units
Volatile Organics 8260 via Low 5035 for sample(s) 01,03-04 (L0206505-03, WG117304)				
4-Methyl-2-pentanone	ND	ND	NC	ug/kg
2-Hexanone	ND	ND	NC	ug/kg
Ethyl methacrylate	ND	ND	NC	ug/kg
Acrolein	ND	ND	NC	ug/kg
Acrylonitrile	ND	ND	NC	ug/kg
Bromochloromethane	ND	ND	NC	ug/kg
Tetrahydrofuran	ND	ND	NC	ug/kg
2,2-Dichloropropane	ND	ND	NC	ug/kg
1,2-Dibromoethane	ND	ND	NC	ug/kg
1,3-Dichloropropane	ND	ND	NC	ug/kg
1,1,1,2-Tetrachloroethane	ND	ND	NC	ug/kg
Bromobenzene	ND	ND	NC	ug/kg
n-Butylbenzene	ND	ND	NC	ug/kg
sec-Butylbenzene	ND	ND	NC	ug/kg
tert-Butylbenzene	ND	ND	NC	ug/kg
o-Chlorotoluene	ND	ND	NC	ug/kg
p-Chlorotoluene	ND	ND	NC	ug/kg
1,2-Dibromo-3-chloropropane	ND	ND	NC	ug/kg
Hexachlorobutadiene	ND	ND	NC	ug/kg
Isopropylbenzene	ND	ND	NC	ug/kg
p-Isopropyltoluene	ND	ND	NC	ug/kg
Naphthalene	ND	ND	NC	ug/kg
n-Propylbenzene	ND	ND	NC	ug/kg
1,2,3-Trichlorobenzene	ND	ND	NC	ug/kg
1,2,4-Trichlorobenzene	ND	ND	NC	ug/kg
1,3,5-Trimethylbenzene	ND	ND	NC	ug/kg
1,2,4-Trimethylbenzene	ND	ND	NC	ug/kg
trans-1,4-Dichloro-2-butene	ND	ND	NC	ug/kg
Ethyl ether	ND	ND	NC	ug/kg
Surrogate Recovery				
1,2-Dichloroethane-d4	106.	117.	10	%
Toluene-d8	97.0	91.0	6	%
4-Bromofluorobenzene	124.	109.	13	%
Dibromofluoromethane	102.	107.	5	%

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0206516

Parameter	% Recovery
Volatile Organics 8260 via Low 5035 LCS for sample(s) 01,03-04 (WG117304)	
Chlorobenzene	99
Benzene	109
Toluene	113
1,1-Dichloroethene	97
Trichloroethene	92
Surrogate Recovery	
1,2-Dichloroethane-d4	105
Toluene-d8	103
4-Bromofluorobenzene	99
Dibromofluoromethane	101
Volatile Organics 8260 via High 5035 LCS for sample(s) 02,04 (WG117291)	
Chlorobenzene	95
Benzene	96
Toluene	93
1,1-Dichloroethene	93
Trichloroethene	100
Surrogate Recovery	
1,2-Dichloroethane-d4	101
Toluene-d8	101
4-Bromofluorobenzene	99
Dibromofluoromethane	100

QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0206516

Parameter	MS %	MSD %	RPD
Volatile Organics 8260 via High 5035 for sample(s) 02,04 (L0206571-06, WG117291)			
Chlorobenzene	100	90	11
Benzene	100	89	12
Toluene	100	89	12
1,1-Dichloroethene	110	92	18
Trichloroethene	100	92	8

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206516

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01,03-04								
Volatile Organics 8260 via Low 5035				1	8260B		0711 18:01	BT
Methylene chloride	ND	ug/kg	10.					
1,1-Dichloroethane	ND	ug/kg	1.5					
Chloroform	ND	ug/kg	1.5					
Carbon tetrachloride	ND	ug/kg	1.0					
1,2-Dichloropropane	ND	ug/kg	3.5					
Dibromochloromethane	ND	ug/kg	1.0					
1,1,2-Trichloroethane	ND	ug/kg	1.5					
Tetrachloroethene	ND	ug/kg	1.0					
Chlorobenzene	ND	ug/kg	1.0					
Trichlorofluoromethane	ND	ug/kg	5.0					
1,2-Dichloroethane	ND	ug/kg	1.0					
1,1,1-Trichloroethane	ND	ug/kg	1.0					
Bromodichloromethane	ND	ug/kg	1.0					
trans-1,3-Dichloropropene	ND	ug/kg	1.0					
cis-1,3-Dichloropropene	ND	ug/kg	1.0					
1,1-Dichloropropene	ND	ug/kg	5.0					
Bromoform	ND	ug/kg	4.0					
1,1,2,2-Tetrachloroethane	ND	ug/kg	1.0					
enzene	ND	ug/kg	1.0					
Toluene	ND	ug/kg	1.5					
Ethylbenzene	ND	ug/kg	1.0					
Chloromethane	ND	ug/kg	5.0					
Bromomethane	ND	ug/kg	2.0					
Vinyl chloride	ND	ug/kg	2.0					
Chloroethane	ND	ug/kg	2.0					
1,1-Dichloroethene	ND	ug/kg	1.0					
trans-1,2-Dichloroethene	ND	ug/kg	1.5					
Trichloroethene	ND	ug/kg	1.0					
1,2-Dichlorobenzene	ND	ug/kg	5.0					
1,3-Dichlorobenzene	ND	ug/kg	5.0					
1,4-Dichlorobenzene	ND	ug/kg	5.0					
Methyl tert butyl ether	ND	ug/kg	2.0					
p/m-Xylene	ND	ug/kg	1.0					
o-Xylene	ND	ug/kg	1.0					
cis-1,2-Dichloroethene	ND	ug/kg	1.0					
Dibromomethane	ND	ug/kg	10.					
1,4-Dichlorobutane	ND	ug/kg	10.					
Iodomethane	ND	ug/kg	10.					
1,2,3-Trichloropropane	ND	ug/kg	10.					
Styrene	ND	ug/kg	1.0					
Dichlorodifluoromethane	ND	ug/kg	10.					
Acetone	ND	ug/kg	10.					
Carbon disulfide	ND	ug/kg	10.					
2-Butanone	ND	ug/kg	10.					
Vinyl acetate	ND	ug/kg	10.					
4-Methyl-2-pentanone	ND	ug/kg	10.					
-Hexanone	ND	ug/kg	10.					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206516

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01,03-04								
Volatile Organics 8260 via Low 5035 continued				1	8260B		0711 18:01	BT
Ethyl methacrylate	ND	ug/kg	10.					
Acrolein	ND	ug/kg	25.					
Acrylonitrile	ND	ug/kg	10.					
Bromochloromethane	ND	ug/kg	5.0					
Tetrahydrofuran	ND	ug/kg	20.					
2,2-Dichloropropane	ND	ug/kg	5.0					
1,2-Dibromoethane	ND	ug/kg	5.0					
1,3-Dichloropropane	ND	ug/kg	5.0					
1,1,1,2-Tetrachloroethane	ND	ug/kg	1.0					
Bromobenzene	ND	ug/kg	5.0					
n-Butylbenzene	ND	ug/kg	1.0					
sec-Butylbenzene	ND	ug/kg	1.0					
tert-Butylbenzene	ND	ug/kg	5.0					
o-Chlorotoluene	ND	ug/kg	5.0					
p-Chlorotoluene	ND	ug/kg	5.0					
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.0					
Hexachlorobutadiene	ND	ug/kg	5.0					
Isopropylbenzene	ND	ug/kg	1.0					
p-Isopropyltoluene	ND	ug/kg	1.0					
Naphthalene	ND	ug/kg	5.0					
n-Propylbenzene	ND	ug/kg	1.0					
1,2,3-Trichlorobenzene	ND	ug/kg	5.0					
1,2,4-Trichlorobenzene	ND	ug/kg	5.0					
1,3,5-Trimethylbenzene	ND	ug/kg	5.0					
1,2,4-Trimethylbenzene	ND	ug/kg	5.0					
trans-1,4-Dichloro-2-butene	ND	ug/kg	5.0					
Ethyl ether	ND	ug/kg	5.0					
Surrogate Recovery								
1,2-Dichloroethane-d4	124.	%						
Toluene-d8	95.0	%						
4-Bromofluorobenzene	106.	%						
Dibromofluoromethane	114.	%						
Blank Analysis for sample(s) 02,04								
Volatile Organics 8260 via High 5035				1	8260B		0711 18:36	AR
Methylene chloride	ND	ug/kg	500					
1,1-Dichloroethane	ND	ug/kg	75.					
Chloroform	ND	ug/kg	75.					
Carbon tetrachloride	ND	ug/kg	50.					
1,2-Dichloropropane	ND	ug/kg	180					
Dibromochloromethane	ND	ug/kg	50.					
1,1,2-Trichloroethane	ND	ug/kg	75.					
Tetrachloroethene	ND	ug/kg	50.					
Chlorobenzene	ND	ug/kg	50.					
Trichlorofluoromethane	ND	ug/kg	250					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206516

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 02,04								
Volatile Organics 8260 via High 5035 continued				1	8260B		0711 18:36	AR
1,2-Dichloroethane	ND	ug/kg	50.					
1,1,1-Trichloroethane	ND	ug/kg	50.					
Bromodichloromethane	ND	ug/kg	50.					
trans-1,3-Dichloropropene	ND	ug/kg	50.					
cis-1,3-Dichloropropene	ND	ug/kg	50.					
1,1-Dichloropropene	ND	ug/kg	250					
Bromoform	ND	ug/kg	50.					
1,1,2,2-Tetrachloroethane	ND	ug/kg	50.					
Benzene	ND	ug/kg	50.					
Toluene	ND	ug/kg	75.					
Ethylbenzene	ND	ug/kg	50.					
Chloromethane	ND	ug/kg	250					
Bromomethane	ND	ug/kg	100					
Vinyl chloride	ND	ug/kg	100					
Chloroethane	ND	ug/kg	100					
1,1-Dichloroethene	ND	ug/kg	50.					
trans-1,2-Dichloroethene	ND	ug/kg	75.					
Trichloroethene	ND	ug/kg	50.					
,2-Dichlorobenzene	ND	ug/kg	250					
,3-Dichlorobenzene	ND	ug/kg	250					
1,4-Dichlorobenzene	ND	ug/kg	250					
Methyl tert butyl ether	ND	ug/kg	100					
p/m-Xylene	ND	ug/kg	50.					
o-Xylene	ND	ug/kg	50.					
cis-1,2-Dichloroethene	ND	ug/kg	50.					
Dibromomethane	ND	ug/kg	500					
1,4-Dichlorobutane	ND	ug/kg	500					
Iodomethane	ND	ug/kg	500					
1,2,3-Trichloropropane	ND	ug/kg	500					
Styrene	ND	ug/kg	50.					
Dichlorodifluoromethane	ND	ug/kg	500					
Acetone	ND	ug/kg	500					
Carbon disulfide	ND	ug/kg	500					
2-Butanone	ND	ug/kg	500					
Vinyl acetate	ND	ug/kg	500					
4-Methyl-2-pentanone	ND	ug/kg	500					
2-Hexanone	ND	ug/kg	500					
Ethyl methacrylate	ND	ug/kg	500					
Acrolein	ND	ug/kg	1200					
Acrylonitrile	ND	ug/kg	500					
Bromochloromethane	ND	ug/kg	250					
Tetrahydrofuran	ND	ug/kg	1000					
2,2-Dichloropropane	ND	ug/kg	250					
1,2-Dibromoethane	ND	ug/kg	250					
1,3-Dichloropropane	ND	ug/kg	250					
1,1,1,2-Tetrachloroethane	ND	ug/kg	50.					
romobenzene	ND	ug/kg	250					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206516

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Blank Analysis for sample(s) 02,04								
Volatile Organics 8260 via High 5035 continued				1	8260B		0711 18:36	AR
n-Butylbenzene	ND	ug/kg	50.					
sec-Butylbenzene	ND	ug/kg	50.					
tert-Butylbenzene	ND	ug/kg	250					
o-Chlorotoluene	ND	ug/kg	250					
p-Chlorotoluene	ND	ug/kg	250					
1,2-Dibromo-3-chloropropane	ND	ug/kg	250					
Hexachlorobutadiene	ND	ug/kg	250					
Isopropylbenzene	ND	ug/kg	50.					
p-Isopropyltoluene	ND	ug/kg	50.					
Naphthalene	ND	ug/kg	250					
n-Propylbenzene	ND	ug/kg	50.					
1,2,3-Trichlorobenzene	ND	ug/kg	250					
1,2,4-Trichlorobenzene	ND	ug/kg	250					
1,3,5-Trimethylbenzene	ND	ug/kg	250					
1,2,4-Trimethylbenzene	ND	ug/kg	250					
trans-1,4-Dichloro-2-butene	ND	ug/kg	250					
Ethyl ether	ND	ug/kg	250					
Surrogate Recovery								
1,2-Dichloroethane-d4	100.	%						
Toluene-d8	99.0	%						
4-Bromofluorobenzene	103.	%						
Dibromofluoromethane	98.0	%						

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Update III, 1997.

30. Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.

Please note that all solid samples are reported on dry weight basis unless noted otherwise.

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

attachment 1

Quality Control Acceptance Criteria

Volatile Organics by Method 8260B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
1,2-Dichloroethane-d_4	75%	125%	75%	125%
4-Bromofluorobenzene	75%	125%	75%	125%
Toluene-d_8	75%	125%	75%	125%
Dibromofluoromethane	75%	125%	75%	125%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery AQ Limits		percent recovery Soil Limits		duplicate and/or MSD AQ Limits	duplicate and/or MSD Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	61%	145%	59%	172%	all target compounds	
Trichloroethene	71%	120%	62%	137%	20%	30%
Chlorobenzene	75%	130%	60%	133%		
Benzene	76%	127%	66%	142%		
Toluene	76%	125%	59%	139%		

Volatile Organics by Method 8021B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
4-Bromochlorobenzene	70%	110%	70%	120%
4-Bromofluorobenzene	70%	110%	70%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery AQ Limits		percent recovery Soil Limits		duplicate and/or MSD AQ Limits	duplicate and/or MSD Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	70%	130%	70%	130%	all target compounds	
Trichloroethene	70%	130%	70%	130%	20%	30%
Chlorobenzene	70%	130%	70%	130%		
Benzene	70%	130%	70%	130%		
Toluene	70%	130%	70%	130%		
Ethylbenzene	70%	130%	70%	130%		

Semi-Volatile Organics by Method 8270C (includes PAHs)

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
Nitrobenzene-d_5	23%	120%	23%	120%
Phenol-d_6	10%	120%	10%	120%
2-Fluorophenol	21%	120%	25%	120%
2-Fluorobiphenyl	43%	120%	30%	120%
p-Terphenyl-d_{14}	33%	120%	18%	120%
2,4,6-Tribromophenol	10%	120%	19%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery AQ Limits		percent recovery Soil Limits		duplicate and/or MSD AQ Limits	duplicate and/or MSD Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,2,4-Trichlorobenzene	39%	98%	38%	107%	all target compounds	
Acenaphthene	46%	118%	31%	137%	40%	50%
2,4-Dinitrotoluene	24%	96%	28%	89%		
Pyrene	26%	127%	35%	142%		
N-Nitroso-di-n-propylamine	41%	116%	41%	126%		
1,4-Dichlorobenzene	36%	97%	28%	104%		
Pentachlorophenol	9%	103%	17%	109%		
Phenol	12%	110%	26%	90%		
2-Chlorophenol	27%	123%	25%	102%		
4-Chloro-3-methylphenol	23%	97%	26%	103%		
4-Nitrophenol	10%	80%	11%	114%		

attachment 1

Quality Control Acceptance Criteria

PCB/Pesticides by Method 8082/8081

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
2,4,5,6-Tetrachloro-m-xylene	40%	120%	40%	120%
Decachlorobiphenyl	40%	120%	40%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
Lindane	56%	123%	46%	127%	all target compounds	
Heptachlor	40%	131%	35%	130%	30%	50%
Aldrin	40%	120%	34%	132%		
Dieldrin	52%	126%	31%	134%		
Endrin	56%	121%	42%	139%		
4,4'-DDT	38%	127%	23%	134%		
Aroclor 1242/1016	40%	140%	40%	140%		
Aroclor 1260	40%	140%	40%	140%		

Volatile Petroleum Hydrocarbons (VPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
2,5-Dibromotoluene	70%	130%	70%	130%

laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	70%	130%	70%	130%	50%	50%

Extractable Petroleum Hydrocarbons (EPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
Chloro-octadecane	40%	140%	40%	140%
ortho-Terphenyl	40%	140%	40%	140%
2-Fluorobiphenyl (fractionation)	40%	140%	40%	140%
2-Bromonaphthalene (fractionation)	40%	140%	40%	140%

laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	40%	140%	40%	140%	50%	50%

TPH (GC-FID) by Method 8100M

surrogate spike % recovery	AQ Limits		Soil Limits		duplicate	
					AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
ortho-Terphenyl	40%	140%	40%	140%	40%	40%

TPH by Method 418.1

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
TPH	60%	140%	60%	140%	40%	40%

attachment 1

Quality Control Acceptance Criteria

Trace Metals by Method 6010B/7000 series

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
target analyte	75%	125%	70%	140%	20%	35%

Mercury by Method 7470A/7471A

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
mercury	70%	130%	60%	140%	35%	45%

Total Cyanide by Method 9010B

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
cyanide	80%	120%	65%	135%	30%	40%

Total Phenol by Method 9065

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
phenol	70%	130%	65%	135%	20%	30%

CHAIN OF CUSTODY

PAGE____ OF____

Date Rec'd in Lab: 7/3/02

ALPHA Job #: L020[illegible]516

ALPHA ANALYTICAL LABS
Eight Walkup Drive Westborough, MA 01581
TEL: 508-898-9220 FAX: 508-898-9193

Client Information

Client: Sanborn Head + Assoc.
Address: 239 Littleton Rd Suite 1C
Westford MA
Phone: 978 392 0900
Fax: 978 392 0987
Email:

☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 2170
Project Location: Somerville MA
Project #: 2170
Project Manager: DWW
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH *(only confirmed if pre-approved!)*
Date Due: 7/12/02 Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker: ____
(Default based on Regulatory Criteria Indicated)
Other Formats: ____
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State /Fed	Program	Criteria
MA	MCP	S-1

Other Project Specific Requirements/Comments:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	8260 H	8260 L	Total Solids	Sample Specific Comments
0516-1	SH MW1 S3	7/3/02	0900	S	MBR	1	2	1	
2	SH MW2 S4	↓	1330	↓	MBR	1	2	1	
3	SH MW3 S4	↓	1530	↓	MBR	1	2	1	
4	Trip Blank	7/2	1450			X	X		

ANALYSIS

SAMPLE HANDLING
Filtration
☐ Done
☐ Not needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

TOTAL # BOTTLES

Shaded Gray Areas For Lab Use Only

Container Type	V	V	P
Preservative	F	G	A

Relinquished By:	Date/Time	Received By:	Date/Time
Michael VS Rugan	7/3/02 1808	[illegible]	7/3/02 18:05

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms. See reverse side.

RECEIVED JUL 18 2002

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220 www.alphalab.com

MA:M-MA086 NH:200301-A CT:PH-0574 ME:MA086 RI:65 NY:11148 NJ:MA935 Army:USACE

CERTIFICATE OF ANALYSIS

Client: Sanborn, Head & Associates, Inc.

Address: 239 Littleton Road
Suite 1C
Westford, MA 01886

Attn: Mr. Duncan Wood

Project Number: 2170

Site: 2170

Laboratory Job Number: L0206844

Invoice Number: 65730

Date Received: 12-JUL-02

Date Reported: 17-JUL-02

Delivery Method: Alpha

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L0206844-01	SH MW1	SOMERVILLE, MA
L0206844-02	SH MW2	SOMERVILLE, MA
L0206844-03	SH MW3	SOMERVILLE, MA
L0206844-04	TRIP BLANK	SOMERVILLE, MA

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized by:James R. Roth, PhD

James R. Roth, PhD - Technical Director
This document electronically signed

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206844-01
SH MW1
Sample Matrix: WATER

Condition of Sample: Satisfactory

Number & Type of Containers: 2-Vial

Date Collected: 08-JUL-2002 15:00
Date Received : 12-JUL-2002
Date Reported : 17-JUL-2002

Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 8260				1 8260B		0716 18:05	RY
Methylene chloride	ND	ug/l	2500				
1,1-Dichloroethane	ND	ug/l	380				
Chloroform	ND	ug/l	380				
Carbon tetrachloride	ND	ug/l	250				
1,2-Dichloropropane	ND	ug/l	880				
Dibromochloromethane	ND	ug/l	250				
1,1,2-Trichloroethane	ND	ug/l	380				
Tetrachloroethene	21000	ug/l	500				
Chlorobenzene	ND	ug/l	250				
Trichlorofluoromethane	ND	ug/l	1200				
1,2-Dichloroethane	ND	ug/l	250				
1,1,1-Trichloroethane	ND	ug/l	250				
Bromodichloromethane	ND	ug/l	250				
trans-1,3-Dichloropropene	ND	ug/l	250				
cis-1,3-Dichloropropene	ND	ug/l	250				
1,1-Dichloropropene	ND	ug/l	1200				
Bromoform	ND	ug/l	250				
1,1,2,2-Tetrachloroethane	ND	ug/l	250				
Benzene	ND	ug/l	250				
Toluene	ND	ug/l	380				
Ethylbenzene	ND	ug/l	250				
Chloromethane	ND	ug/l	1200				
Bromomethane	ND	ug/l	500				
Vinyl chloride	ND	ug/l	500				
Chloroethane	ND	ug/l	500				
1,1-Dichloroethene	ND	ug/l	250				
trans-1,2-Dichloroethene	ND	ug/l	380				
Trichloroethene	ND	ug/l	500				
1,2-Dichlorobenzene	ND	ug/l	1200				
1,3-Dichlorobenzene	ND	ug/l	1200				
1,4-Dichlorobenzene	ND	ug/l	1200				
Methyl tert butyl ether	ND	ug/l	500				
p/m-Xylene	ND	ug/l	250				
o-Xylene	ND	ug/l	250				
cis-1,2-Dichloroethene	ND	ug/l	250				
Dibromomethane	ND	ug/l	2500				
1,4-Dichlorobutane	ND	ug/l	2500				
Iodomethane	ND	ug/l	2500				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

aboratory Sample Number: L0206844-01
SH MW1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 8260 continued				1	8260B		0716 18:05	RY
1,2,3-Trichloropropane	ND	ug/l	2500					
Styrene	ND	ug/l	250					
Dichlorodifluoromethane	ND	ug/l	2500					
Acetone	ND	ug/l	2500					
Carbon disulfide	ND	ug/l	2500					
2-Butanone	ND	ug/l	2500					
Vinyl acetate	ND	ug/l	2500					
4-Methyl-2-pentanone	ND	ug/l	2500					
2-Hexanone	ND	ug/l	2500					
Ethyl methacrylate	ND	ug/l	2500					
Acrolein	ND	ug/l	6200					
Acrylonitrile	ND	ug/l	2500					
Bromochloromethane	ND	ug/l	1200					
Tetrahydrofuran	ND	ug/l	5000					
2,2-Dichloropropane	ND	ug/l	1200					
1,2-Dibromoethane	ND	ug/l	1200					
1,3-Dichloropropane	ND	ug/l	1200					
1,1,1,2-Tetrachloroethane	ND	ug/l	250					
Bromobenzene	ND	ug/l	1200					
n-Butylbenzene	ND	ug/l	250					
ec-Butylbenzene	ND	ug/l	250					
ert-Butylbenzene	ND	ug/l	1200					
o-Chlorotoluene	ND	ug/l	1200					
p-Chlorotoluene	ND	ug/l	1200					
1,2-Dibromo-3-chloropropane	ND	ug/l	1200					
Hexachlorobutadiene	ND	ug/l	1200					
Isopropylbenzene	ND	ug/l	250					
p-Isopropyltoluene	ND	ug/l	250					
Naphthalene	ND	ug/l	1200					
n-Propylbenzene	ND	ug/l	250					
1,2,3-Trichlorobenzene	ND	ug/l	1200					
1,2,4-Trichlorobenzene	ND	ug/l	1200					
1,3,5-Trimethylbenzene	ND	ug/l	1200					
1,2,4-Trimethylbenzene	ND	ug/l	1200					
trans-1,4-Dichloro-2-butene	ND	ug/l	1200					
Ethyl ether	ND	ug/l	1200					
Surrogate Recovery								
1,2-Dichloroethane-d4	96.0	%						
Toluene-d8	99.0	%						
4-Bromofluorobenzene	101.	%						
Dibromofluoromethane	100.	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206844-02
SH MW2
Sample Matrix: WATER

Condition of Sample: Satisfactory

Number & Type of Containers: 2-Vial

Date Collected: 08-JUL-2002 15:15
Date Received : 12-JUL-2002
Date Reported : 17-JUL-2002

Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260				1	8260B		0716 18:45	RY
Methylene chloride	ND	ug/l	250					
1,1-Dichloroethane	ND	ug/l	38.					
Chloroform	ND	ug/l	38.					
Carbon tetrachloride	ND	ug/l	25.					
1,2-Dichloropropane	ND	ug/l	88.					
Dibromochloromethane	ND	ug/l	25.					
1,1,2-Trichloroethane	ND	ug/l	38.					
Tetrachloroethene	2000	ug/l	50.					
Chlorobenzene	ND	ug/l	25.					
Trichlorofluoromethane	ND	ug/l	120					
1,2-Dichloroethane	ND	ug/l	25.					
1,1,1-Trichloroethane	660	ug/l	25.					
Bromodichloromethane	ND	ug/l	25.					
trans-1,3-Dichloropropene	ND	ug/l	25.					
cis-1,3-Dichloropropene	ND	ug/l	25.					
1,1-Dichloropropene	ND	ug/l	120					
Bromoform	ND	ug/l	25.					
1,1,2,2-Tetrachloroethane	ND	ug/l	25.					
Benzene	ND	ug/l	25.					
Toluene	ND	ug/l	38.					
Ethylbenzene	ND	ug/l	25.					
Chloromethane	ND	ug/l	120					
Bromomethane	ND	ug/l	50.					
Vinyl chloride	ND	ug/l	50.					
Chloroethane	ND	ug/l	50.					
1,1-Dichloroethene	ND	ug/l	25.					
trans-1,2-Dichloroethene	ND	ug/l	38.					
Trichloroethene	190	ug/l	50.					
1,2-Dichlorobenzene	ND	ug/l	120					
1,3-Dichlorobenzene	ND	ug/l	120					
1,4-Dichlorobenzene	ND	ug/l	120					
Methyl tert butyl ether	ND	ug/l	50.					
p/m-Xylene	ND	ug/l	25.					
o-Xylene	ND	ug/l	25.					
cis-1,2-Dichloroethene	ND	ug/l	25.					
Dibromomethane	ND	ug/l	250					
1,4-Dichlorobutane	ND	ug/l	250					
Iodomethane	ND	ug/l	250					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

aboratory Sample Number: L0206844-02
SH MW2

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 8260 continued				1 8260B		0716 18:45	RY
1,2,3-Trichloropropane	ND	ug/l	250				
Styrene	ND	ug/l	25.				
Dichlorodifluoromethane	ND	ug/l	250				
Acetone	ND	ug/l	250				
Carbon disulfide	ND	ug/l	250				
2-Butanone	ND	ug/l	250				
Vinyl acetate	ND	ug/l	250				
4-Methyl-2-pentanone	ND	ug/l	250				
2-Hexanone	ND	ug/l	250				
Ethyl methacrylate	ND	ug/l	250				
Acrolein	ND	ug/l	620				
Acrylonitrile	ND	ug/l	250				
Bromochloromethane	ND	ug/l	120				
Tetrahydrofuran	ND	ug/l	500				
2,2-Dichloropropane	ND	ug/l	120				
1,2-Dibromoethane	ND	ug/l	120				
1,3-Dichloropropane	ND	ug/l	120				
1,1,1,2-Tetrachloroethane	ND	ug/l	25.				
Bromobenzene	ND	ug/l	120				
n-Butylbenzene	ND	ug/l	25.				
ec-Butylbenzene	ND	ug/l	25.				
tert-Butylbenzene	ND	ug/l	120				
o-Chlorotoluene	ND	ug/l	120				
p-Chlorotoluene	ND	ug/l	120				
1,2-Dibromo-3-chloropropane	ND	ug/l	120				
Hexachlorobutadiene	ND	ug/l	120				
Isopropylbenzene	ND	ug/l	25.				
p-Isopropyltoluene	ND	ug/l	25.				
Naphthalene	ND	ug/l	120				
n-Propylbenzene	ND	ug/l	25.				
1,2,3-Trichlorobenzene	ND	ug/l	120				
1,2,4-Trichlorobenzene	ND	ug/l	120				
1,3,5-Trimethylbenzene	ND	ug/l	120				
1,2,4-Trimethylbenzene	ND	ug/l	120				
trans-1,4-Dichloro-2-butene	ND	ug/l	120				
Ethyl ether	ND	ug/l	120				
Surrogate Recovery							
1,2-Dichloroethane-d4	93.0	%					
Toluene-d8	97.0	%					
4-Bromofluorobenzene	98.0	%					
Dibromofluoromethane	99.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086   NH:200395-B/C   CT:PH-0574   ME:MA086   RI:65

Laboratory Sample Number: L0206844-03
SH MW3
Sample Matrix: WATER

Date Collected: 08-JUL-2002 15:30
Date Received : 12-JUL-2002
Date Reported : 17-JUL-2002

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 2-Vial

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260				1	8260B		0717 11:54	RY
Methylene chloride	ND	ug/l	2500					
1,1-Dichloroethane	ND	ug/l	380					
Chloroform	ND	ug/l	380					
Carbon tetrachloride	ND	ug/l	250					
1,2-Dichloropropane	ND	ug/l	880					
Dibromochloromethane	ND	ug/l	250					
1,1,2-Trichloroethane	ND	ug/l	380					
Tetrachloroethene	26000	ug/l	500					
Chlorobenzene	ND	ug/l	250					
Trichlorofluoromethane	ND	ug/l	1200					
1,2-Dichloroethane	ND	ug/l	250					
1,1,1-Trichloroethane	1200	ug/l	250					
Bromodichloromethane	ND	ug/l	250					
trans-1,3-Dichloropropene	ND	ug/l	250					
cis-1,3-Dichloropropene	ND	ug/l	250					
1,1-Dichloropropene	ND	ug/l	1200					
Bromoform	ND	ug/l	250					
1,1,2,2-Tetrachloroethane	ND	ug/l	250					
Benzene	ND	ug/l	250					
Toluene	ND	ug/l	380					
Ethylbenzene	ND	ug/l	250					
Chloromethane	ND	ug/l	1200					
Bromomethane	ND	ug/l	500					
Vinyl chloride	ND	ug/l	500					
Chloroethane	ND	ug/l	500					
1,1-Dichloroethene	ND	ug/l	250					
trans-1,2-Dichloroethene	ND	ug/l	380					
Trichloroethene	870	ug/l	500					
1,2-Dichlorobenzene	ND	ug/l	1200					
1,3-Dichlorobenzene	ND	ug/l	1200					
1,4-Dichlorobenzene	ND	ug/l	1200					
Methyl tert butyl ether	ND	ug/l	500					
p/m-Xylene	ND	ug/l	250					
o-Xylene	ND	ug/l	250					
cis-1,2-Dichloroethene	ND	ug/l	250					
Dibromomethane	ND	ug/l	2500					
1,4-Dichlorobutane	ND	ug/l	2500					
Iodomethane	ND	ug/l	2500					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

aboratory Sample Number: L0206844-03
SH MW3

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE		ID
					PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1 8260B		0717 11:54	RY
1,2,3-Trichloropropane	ND	ug/l	2500				
Styrene	ND	ug/l	250				
Dichlorodifluoromethane	ND	ug/l	2500				
Acetone	ND	ug/l	2500				
Carbon disulfide	ND	ug/l	2500				
2-Butanone	ND	ug/l	2500				
Vinyl acetate	ND	ug/l	2500				
4-Methyl-2-pentanone	ND	ug/l	2500				
2-Hexanone	ND	ug/l	2500				
Ethyl methacrylate	ND	ug/l	2500				
Acrolein	ND	ug/l	6200				
Acrylonitrile	ND	ug/l	2500				
Bromochloromethane	ND	ug/l	1200				
Tetrahydrofuran	ND	ug/l	5000				
2,2-Dichloropropane	ND	ug/l	1200				
1,2-Dibromoethane	ND	ug/l	1200				
1,3-Dichloropropane	ND	ug/l	1200				
1,1,1,2-Tetrachloroethane	ND	ug/l	250				
Bromobenzene	ND	ug/l	1200				
n-Butylbenzene	ND	ug/l	250				
ec-Butylbenzene	ND	ug/l	250				
ert-Butylbenzene	ND	ug/l	1200				
o-Chlorotoluene	ND	ug/l	1200				
p-Chlorotoluene	ND	ug/l	1200				
1,2-Dibromo-3-chloropropane	ND	ug/l	1200				
Hexachlorobutadiene	ND	ug/l	1200				
Isopropylbenzene	ND	ug/l	250				
p-Isopropyltoluene	ND	ug/l	250				
Naphthalene	ND	ug/l	1200				
n-Propylbenzene	ND	ug/l	250				
1,2,3-Trichlorobenzene	ND	ug/l	1200				
1,2,4-Trichlorobenzene	ND	ug/l	1200				
1,3,5-Trimethylbenzene	ND	ug/l	1200				
1,2,4-Trimethylbenzene	ND	ug/l	1200				
trans-1,4-Dichloro-2-butene	ND	ug/l	1200				
Ethyl ether	ND	ug/l	1200				
Surrogate Recovery							
1,2-Dichloroethane-d4	94.0	%					
Toluene-d8	97.0	%					
4-Bromofluorobenzene	99.0	%					
Dibromofluoromethane	99.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA:M-MA-086 NH:200395-B/C CT:PH-0574 ME:MA086 RI:65

Laboratory Sample Number: L0206844-04
TRIP BLANK
Sample Matrix: WATER

Condition of Sample: Satisfactory

Number & Type of Containers: 2-Vial

Date Collected: 17-JUN-2002 15:45
Date Received : 12-JUL-2002
Date Reported : 17-JUL-2002

Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260				1	8260B		0716 19:56	RY
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	0.75					
Chloroform	ND	ug/l	0.75					
Carbon tetrachloride	ND	ug/l	0.50					
1,2-Dichloropropane	ND	ug/l	1.8					
Dibromochloromethane	ND	ug/l	0.50					
1,1,2-Trichloroethane	ND	ug/l	0.75					
Tetrachloroethene	ND	ug/l	1.0					
Chlorobenzene	ND	ug/l	0.50					
Trichlorofluoromethane	ND	ug/l	2.5					
1,2-Dichloroethane	ND	ug/l	0.50					
1,1,1-Trichloroethane	ND	ug/l	0.50					
Bromodichloromethane	ND	ug/l	0.50					
trans-1,3-Dichloropropene	ND	ug/l	0.50					
cis-1,3-Dichloropropene	ND	ug/l	0.50					
1,1-Dichloropropene	ND	ug/l	2.5					
Bromoform	ND	ug/l	0.50					
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50					
Benzene	ND	ug/l	0.50					
Toluene	ND	ug/l	0.75					
Ethylbenzene	ND	ug/l	0.50					
Chloromethane	ND	ug/l	2.5					
Bromomethane	ND	ug/l	1.0					
Vinyl chloride	ND	ug/l	1.0					
Chloroethane	ND	ug/l	1.0					
1,1-Dichloroethene	ND	ug/l	0.50					
trans-1,2-Dichloroethene	ND	ug/l	0.75					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l	2.5					
Methyl tert butyl ether	ND	ug/l	1.0					
p/m-Xylene	ND	ug/l	0.50					
o-Xylene	ND	ug/l	0.50					
cis-1,2-Dichloroethene	ND	ug/l	0.50					
Dibromomethane	ND	ug/l	5.0					
1,4-Dichlorobutane	ND	ug/l	5.0					
Iodomethane	ND	ug/l	5.0					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

aboratory Sample Number: L0206844-04
TRIP BLANK

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Volatile Organics by GC/MS 8260 continued				1	8260B		0716 19:56	RY
1,2,3-Trichloropropane	ND	ug/l	5.0					
Styrene	ND	ug/l	0.50					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/l	5.0					
4-Methyl-2-pentanone	ND	ug/l	5.0					
2-Hexanone	ND	ug/l	5.0					
Ethyl methacrylate	ND	ug/l	5.0					
Acrolein	ND	ug/l	12.					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/l	2.5					
1,2-Dibromoethane	ND	ug/l	2.5					
1,3-Dichloropropane	ND	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50					
Bromobenzene	ND	ug/l	2.5					
n-Butylbenzene	ND	ug/l	0.50					
ec-Butylbenzene	ND	ug/l	0.50					
tert-Butylbenzene	ND	ug/l	2.5					
o-Chlorotoluene	ND	ug/l	2.5					
p-Chlorotoluene	ND	ug/l	2.5					
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5					
Hexachlorobutadiene	ND	ug/l	2.5					
Isopropylbenzene	ND	ug/l	0.50					
p-Isopropyltoluene	ND	ug/l	0.50					
Naphthalene	ND	ug/l	2.5					
n-Propylbenzene	ND	ug/l	0.50					
1,2,3-Trichlorobenzene	ND	ug/l	2.5					
1,2,4-Trichlorobenzene	ND	ug/l	2.5					
1,3,5-Trimethylbenzene	ND	ug/l	2.5					
1,2,4-Trimethylbenzene	ND	ug/l	2.5					
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5					
Ethyl ether	ND	ug/l	2.5					
Surrogate Recovery								
1,2-Dichloroethane-d4	98.0	%						
Toluene-d8	98.0	%						
4-Bromofluorobenzene	102.	%						
Dibromofluoromethane	99.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L0206844

Parameter	% Recovery
Volatile Organics by GC/MS 8260 LCS for sample(s) 03 (WG117175)	
Chlorobenzene	104
Benzene	108
Toluene	104
1,1-Dichloroethene	97
Trichloroethene	111
Surrogate Recovery	
1,2-Dichloroethane-d4	94
Toluene-d8	96
4-Bromofluorobenzene	98
Dibromofluoromethane	98
Volatile Organics by GC/MS 8260 LCS for sample(s) 01-02,04 (WG117175)	
Chlorobenzene	99
Benzene	103
Toluene	99
1,1-Dichloroethene	93
Trichloroethene	114
Surrogate Recovery	
1,2-Dichloroethane-d4	93
Toluene-d8	99
4-Bromofluorobenzene	93
Dibromofluoromethane	98

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L0206844

Parameter	MS %	MSD %	RPD
Volatile Organics by GC/MS 8260 for sample(s) 01-04 (L0206614-03, WG117175)			
Chlorobenzene	83	82	1
Benzene	86	86	0
Toluene	83	82	1
1,1-Dichloroethene	81	84	4
Trichloroethene	92	94	2

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206844

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE PREP	DATE ANAL	ID
Blank Analysis for sample(s) 01-02,04								
Volatile Organics by GC/MS 8260				1	8260B		0716 16:52	RY
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	0.75					
Chloroform	ND	ug/l	0.75					
Carbon tetrachloride	ND	ug/l	0.50					
1,2-Dichloropropane	ND	ug/l	1.8					
Dibromochloromethane	ND	ug/l	0.50					
1,1,2-Trichloroethane	ND	ug/l	0.75					
Tetrachloroethene	ND	ug/l	1.0					
Chlorobenzene	ND	ug/l	0.50					
Trichlorofluoromethane	ND	ug/l	2.5					
1,2-Dichloroethane	ND	ug/l	0.50					
1,1,1-Trichloroethane	ND	ug/l	0.50					
Bromodichloromethane	ND	ug/l	0.50					
trans-1,3-Dichloropropene	ND	ug/l	0.50					
cis-1,3-Dichloropropene	ND	ug/l	0.50					
1,1-Dichloropropene	ND	ug/l	2.5					
Bromoform	ND	ug/l	0.50					
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50					
Benzene	ND	ug/l	0.50					
Toluene	ND	ug/l	0.75					
Ethylbenzene	ND	ug/l	0.50					
Chloromethane	ND	ug/l	2.5					
Bromomethane	ND	ug/l	1.0					
Vinyl chloride	ND	ug/l	1.0					
Chloroethane	ND	ug/l	1.0					
1,1-Dichloroethene	ND	ug/l	0.50					
trans-1,2-Dichloroethene	ND	ug/l	0.75					
Trichloroethene	ND	ug/l	1.0					
1,2-Dichlorobenzene	ND	ug/l	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l	2.5					
Methyl tert butyl ether	ND	ug/l	1.0					
p/m-Xylene	ND	ug/l	0.50					
o-Xylene	ND	ug/l	0.50					
cis-1,2-Dichloroethene	ND	ug/l	0.50					
Dibromomethane	ND	ug/l	5.0					
1,4-Dichlorobutane	ND	ug/l	5.0					
Iodomethane	ND	ug/l	5.0					
1,2,3-Trichloropropane	ND	ug/l	5.0					
Styrene	ND	ug/l	0.50					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/l	5.0					
4-Methyl-2-pentanone	ND	ug/l	5.0					
2-Hexanone	ND	ug/l	5.0					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

aboratory Job Number: L0206844

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Blank Analysis for sample(s) 01-02,04								
Volatile Organics by GC/MS 8260 continued				1	8260B		0716 16:52	RY
Ethyl methacrylate	ND	ug/l	5.0					
Acrolein	ND	ug/l	12.					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/l	2.5					
1,2-Dibromoethane	ND	ug/l	2.5					
1,3-Dichloropropane	ND	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50					
Bromobenzene	ND	ug/l	2.5					
n-Butylbenzene	ND	ug/l	0.50					
sec-Butylbenzene	ND	ug/l	0.50					
tert-Butylbenzene	ND	ug/l	2.5					
o-Chlorotoluene	ND	ug/l	2.5					
p-Chlorotoluene	ND	ug/l	2.5					
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5					
Hexachlorobutadiene	ND	ug/l	2.5					
Isopropylbenzene	ND	ug/l	0.50					
-Isopropyltoluene	ND	ug/l	0.50					
aphthalene	ND	ug/l	2.5					
n-Propylbenzene	ND	ug/l	0.50					
1,2,3-Trichlorobenzene	ND	ug/l	2.5					
1,2,4-Trichlorobenzene	ND	ug/l	2.5					
1,3,5-Trimethylbenzene	ND	ug/l	2.5					
1,2,4-Trimethylbenzene	ND	ug/l	2.5					
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5					
Ethyl ether	ND	ug/l	2.5					
Surrogate Recovery								
1,2-Dichloroethane-d4	93.0	%						
Toluene-d8	97.0	%						
4-Bromofluorobenzene	98.0	%						
Dibromofluoromethane	98.0	%						
Blank Analysis for sample(s) 03								
Volatile Organics by GC/MS 8260				1	8260B		0717 10:08	RY
Methylene chloride	ND	ug/l	5.0					
1,1-Dichloroethane	ND	ug/l	0.75					
Chloroform	ND	ug/l	0.75					
Carbon tetrachloride	ND	ug/l	0.50					
1,2-Dichloropropane	ND	ug/l	1.8					
Dibromochloromethane	ND	ug/l	0.50					
1,1,2-Trichloroethane	ND	ug/l	0.75					
Tetrachloroethene	ND	ug/l	0.50					
Chlorobenzene	ND	ug/l	0.50					
richlorofluoromethane	ND	ug/l	2.5					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

Laboratory Job Number: L0206844

Continued

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATE		ID
						PREP	ANAL	
Blank Analysis for sample(s) 03								
Volatile Organics by GC/MS 8260 continued				1	8260B		0717 10:08	RY
1,2-Dichloroethane	ND	ug/l	0.50					
1,1,1-Trichloroethane	ND	ug/l	0.50					
Bromodichloromethane	ND	ug/l	0.50					
trans-1,3-Dichloropropene	ND	ug/l	0.50					
cis-1,3-Dichloropropene	ND	ug/l	0.50					
1,1-Dichloropropene	ND	ug/l	2.5					
Bromoform	ND	ug/l	0.50					
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50					
Benzene	ND	ug/l	0.50					
Toluene	ND	ug/l	0.75					
Ethylbenzene	ND	ug/l	0.50					
Chloromethane	ND	ug/l	2.5					
Bromomethane	ND	ug/l	1.0					
Vinyl chloride	ND	ug/l	1.0					
Chloroethane	ND	ug/l	1.0					
1,1-Dichloroethene	ND	ug/l	0.50					
trans-1,2-Dichloroethene	ND	ug/l	0.75					
Trichloroethene	ND	ug/l	0.50					
1,2-Dichlorobenzene	ND	ug/l	2.5					
1,3-Dichlorobenzene	ND	ug/l	2.5					
1,4-Dichlorobenzene	ND	ug/l	2.5					
Methyl tert butyl ether	ND	ug/l	1.0					
p/m-Xylene	ND	ug/l	0.50					
o-Xylene	ND	ug/l	0.50					
cis-1,2-Dichloroethene	ND	ug/l	0.50					
Dibromomethane	ND	ug/l	5.0					
1,4-Dichlorobutane	ND	ug/l	5.0					
Iodomethane	ND	ug/l	5.0					
1,2,3-Trichloropropane	ND	ug/l	5.0					
Styrene	ND	ug/l	0.50					
Dichlorodifluoromethane	ND	ug/l	5.0					
Acetone	ND	ug/l	5.0					
Carbon disulfide	ND	ug/l	5.0					
2-Butanone	ND	ug/l	5.0					
Vinyl acetate	ND	ug/l	5.0					
4-Methyl-2-pentanone	ND	ug/l	5.0					
2-Hexanone	ND	ug/l	5.0					
Ethyl methacrylate	ND	ug/l	5.0					
Acrolein	ND	ug/l	12.					
Acrylonitrile	ND	ug/l	5.0					
Bromochloromethane	ND	ug/l	2.5					
Tetrahydrofuran	ND	ug/l	10.					
2,2-Dichloropropane	ND	ug/l	2.5					
1,2-Dibromoethane	ND	ug/l	2.5					
1,3-Dichloropropane	ND	ug/l	2.5					
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50					
Bromobenzene	ND	ug/l	2.5					

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH BLANK ANALYSIS

aboratory Job Number: L0206844

Continued

Blank Analysis for sample(s) 03

PARAMETER	RESULT	UNITS	RDL	REF METHOD	DATE PREP	DATE ANAL	ID
Volatile Organics by GC/MS 8260 continued				1 8260B		0717 10:08	RY
n-Butylbenzene	ND	ug/l	0.50				
sec-Butylbenzene	ND	ug/l	0.50				
tert-Butylbenzene	ND	ug/l	2.5				
o-Chlorotoluene	ND	ug/l	2.5				
p-Chlorotoluene	ND	ug/l	2.5				
1,2-Dibromo-3-chloropropane	ND	ug/l	2.5				
Hexachlorobutadiene	ND	ug/l	2.5				
Isopropylbenzene	ND	ug/l	0.50				
p-Isopropyltoluene	ND	ug/l	0.50				
Naphthalene	ND	ug/l	2.5				
n-Propylbenzene	ND	ug/l	0.50				
1,2,3-Trichlorobenzene	ND	ug/l	2.5				
1,2,4-Trichlorobenzene	ND	ug/l	2.5				
1,3,5-Trimethylbenzene	ND	ug/l	2.5				
1,2,4-Trimethylbenzene	ND	ug/l	2.5				
trans-1,4-Dichloro-2-butene	ND	ug/l	2.5				
Ethyl ether	ND	ug/l	2.5				
urrogate Recovery							
1,2-Dichloroethane-d4	95.0	%					
Toluene-d8	98.0	%					
4-Bromofluorobenzene	95.0	%					
Dibromofluoromethane	99.0	%					

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Update III, 1997.

GLOSSARY OF TERMS AND SYMBOLS

REF	Reference number in which test method may be found.
METHOD	Method number by which analysis was performed.
ID	Initials of the analyst.

Please note that all solid samples are reported on dry weight basis unless noted otherwise

LIMITATION OF LIABILITIES

Alpha Analytical, Inc. performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical, Inc., shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical, Inc. be held liable for any incidental consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical, Inc.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding times and splitting of samples in the field.

attachment 1

Quality Control Acceptance Criteria

Volatile Organics by Method 8260B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
1,2-Dichloroethane-d_4	75%	125%	75%	125%
4-Bromofluorobenzene	75%	125%	75%	125%
Toluene-d_8	75%	125%	75%	125%
Dibromofluoromethane	75%	125%	75%	125%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	61%	145%	59%	172%	all target compounds	
Trichloroethene	71%	120%	62%	137%	20%	30%
Chlorobenzene	75%	130%	60%	133%		
Benzene	76%	127%	66%	142%		
Toluene	76%	125%	59%	139%		

Volatile Organics by Method 8021B

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
4-Bromochlorobenzene	70%	110%	70%	120%
4-Bromofluorobenzene	70%	110%	70%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,1-Dichloroethene	70%	130%	70%	130%	all target compounds	
Trichloroethene	70%	130%	70%	130%	20%	30%
Chlorobenzene	70%	130%	70%	130%		
Benzene	70%	130%	70%	130%		
Toluene	70%	130%	70%	130%		
Ethylbenzene	70%	130%	70%	130%		

Semi-Volatile Organics by Method 8270C (includes PAHs)

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
Nitrobenzene-d_5	23%	120%	23%	120%
Phenol-d_6	10%	120%	10%	120%
2-Fluorophenol	21%	120%	25%	120%
2-Fluorobiphenyl	43%	120%	30%	120%
p-Terphenyl-d_{14}	33%	120%	18%	120%
2,4,6-Tribromophenol	10%	120%	19%	120%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
1,2,4-Trichlorobenzene	39%	98%	38%	107%	all target compounds	
Acenaphthene	46%	118%	31%	137%	40%	50%
2,4-Dinitrotoluene	24%	96%	28%	89%		
Pyrene	26%	127%	35%	142%		
N-Nitroso-di-n-propylamine	41%	116%	41%	126%		
1,4-Dichlorobenzene	36%	97%	28%	104%		
Pentachlorophenol	9%	103%	17%	109%		
Phenol	12%	110%	26%	90%		
2-Chlorophenol	27%	123%	25%	102%		
4-Chloro-3-methylphenol	23%	97%	26%	103%		
4-Nitrophenol	10%	80%	11%	114%		

attachment 1

Quality Control Acceptance Criteria

PCB/Pesticides by Method 8082/8081

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
2,4,5,6-Tetrachloro-m-xylene	40%	120%	40%	120%
Decachlorobiphenyl	30%	150%	30%	150%

matrix spike / matrix spike duplicate (MS/MSD) & lab control sample (LCS)	percent recovery				duplicate and/or MSD	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
Lindane	56%	123%	46%	127%	all target compounds	
Heptachlor	40%	131%	35%	130%	30%	50%
Aldrin	40%	120%	34%	132%		
Dieldrin	52%	126%	31%	134%		
Endrin	56%	121%	42%	139%		
4,4'-DDT	38%	127%	23%	134%		
Aroclor 1242/1016	40%	140%	40%	140%		
Aroclor 1260	40%	140%	40%	140%		

Volatile Petroleum Hydrocarbons (VPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
2,5-Dibromotoluene	70%	130%	70%	130%

laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	70%	130%	70%	130%	50%	50%

Extractable Petroleum Hydrocarbons (EPH) by MA DEP 98-1

surrogate spike % recovery	AQ Limits		Soil Limits	
	LCL	UCL	LCL	UCL
Chloro-octadecane	40%	140%	40%	140%
ortho-Terphenyl	40%	140%	40%	140%
2-Fluorobiphenyl (fractionation)	40%	140%	40%	140%
2-Bromonaphthalene (fractionation)	40%	140%	40%	140%

laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
all compounds	40%	140%	40%	140%	50%	50%

TPH (GC-FID) by Method 8100M

surrogate spike % recovery	AQ Limits		Soil Limits		duplicate	
					AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
ortho-Terphenyl	40%	140%	40%	140%	40%	40%

TPH by Method 418.1

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
TPH	60%	140%	60%	140%	40%	40%

attachment 1

Quality Control Acceptance Criteria

Trace Metals by Method 6010B/7000 series

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
target analyte	75%	125%	70%	140%	20%	35%

Mercury by Method 7470A/7471A

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
mercury	70%	130%	60%	140%	35%	45%

Total Cyanide by Method 9010B

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
cyanide	80%	120%	65%	135%	30%	40%

Total Phenol by Method 9065

matrix spike (MS) & laboratory control sample (LCS)	percent recovery				duplicate	
	AQ Limits		Soil Limits		AQ Limits	Soil Limits
	LCL	UCL	LCL	UCL	RPD	RPD
phenol	70%	130%	65%	135%	20%	30%

ALPHA Analytical Laboratories, Inc.

Eight Walkup Drive Westborough, MA 01581
PH: 508.898.9220 FAX: 508.898.9193 www.alphalab.com

CHAIN OF CUSTODY

N° 15936

Sheet 1 of 1

ALPHA Job #: L0206[illegible]

Date Rec'd in Lab: 7/12/02

Date Due: 7/19/02 7/17

Client Name: Sanborn Head + Assoc.
Client Address: 239 Littleton Rd Suite 1C
Westford MA 01886
Phone #: 978 392 0900 FAX #: 0987

Project Name: 2170
Project Location: Sunnyside MA
Project #: 2170
Project Manager: Duncan Wood

Report To:
Bill To:

☐ Standard TAT
☐ RUSH TAT____ (# days)
☐ FAX Results
☐ State Forms
☐ SMART Report

Comments: (Please note specific method, detection limit or reporting requirements.)

ANALYSIS REQUEST

ALPHA Lab #	Sample ID	Matrix/Source *	Sampling Date	Sampling Time	Sampler's Initials	Solubles: Field Filtered? (Y/N)	VOC 8260									
1	SH MW1	GW	7/9/02	1500	MBM		2									
2	SH MW2	↓	↓	1515	MBM		2									
3	SH MW3	↓	↓	1530	MBM		2									
4	T. Blank		6/17	1545			1									

# of Containers:	7
Container Type: *	✓
Preservative: *	D

All samples submitted are subject to Alpha's standard Terms and Conditions.

* See Reverse side for Matrix, Container, and Preservative Codes.

Form No.: 01-01

Transfers Relinquished By:	Transfers Accepted By:	Date	Time
	E Edmonds	7/12/02	1045
E Edmonds		7/12/02	1755

Report Date:
13-Aug-04 16:05

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Laboratory Report

GeoInsight, Inc.
319 Littleton Road; Suite 105
Westford, MA 01886
Attn: Mike Webster

Project:Tufts St-Somerville, MA
Project #:4140

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA16375-01	MW-1	Ground Water	09-Aug-04 15:50	10-Aug-04 14:30
SA16375-02	MW-3	Ground Water	09-Aug-04 15:15	10-Aug-04 14:30
SA16375-03	SH-1	Ground Water	09-Aug-04 14:25	10-Aug-04 14:30
SA16375-04	SH-3	Ground Water	09-Aug-04 14:05	10-Aug-04 14:30

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
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Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

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ENVIRONMENTAL ANALYSES

11 Almgren Drive • Agawam, Massachusetts 01001 • Operational Building & Sample Receiving
830 Silver Street • Agawam, Massachusetts 01001 • Administrative Offices, Volatile & Air Departments
1-800-789-9115 • 413-789-9018 • Fax 413-789-4076

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SA16375-01	4140	Ground Water	09-Aug-04 15:50	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B	Prepared by method Volatiles								
Acetone	BRL	40000 ug/l	2000	SW846 8260B	12-Aug-04	12-Aug-04	4080682	RLJ	
Acrylonitrile	BRL	2000 ug/l	2000	"	"	"	"	"	
Benzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Bromobenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Bromochloromethane	BRL	2000 ug/l	2000	"	"	"	"	"	
Bromodichloromethane	BRL	2000 ug/l	2000	"	"	"	"	"	
Bromoform	BRL	2000 ug/l	2000	"	"	"	"	"	
Bromomethane	BRL	4000 ug/l	2000	"	"	"	"	"	
2-Butanone (MEK)	BRL	20000 ug/l	2000	"	"	"	"	"	
n-Butylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
sec-Butylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
tert-Butylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Carbon disulfide	BRL	10000 ug/l	2000	"	"	"	"	"	
Carbon tetrachloride	BRL	2000 ug/l	2000	"	"	"	"	"	
Chlorobenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Chloroethane	BRL	4000 ug/l	2000	"	"	"	"	"	
Chloroform	BRL	2000 ug/l	2000	"	"	"	"	"	
Chloromethane	BRL	4000 ug/l	2000	"	"	"	"	"	
2-Chlorotoluene	BRL	2000 ug/l	2000	"	"	"	"	"	
4-Chlorotoluene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	4000 ug/l	2000	"	"	"	"	"	
Dibromochloromethane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	2000 ug/l	2000	"	"	"	"	"	
Dibromomethane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	4000 ug/l	2000	"	"	"	"	"	
1,1-Dichloroethane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2-Dichloroethane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,1-Dichloroethene	BRL	2000 ug/l	2000	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	2000 ug/l	2000	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2-Dichloropropane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,3-Dichloropropane	BRL	2000 ug/l	2000	"	"	"	"	"	
2,2-Dichloropropane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,1-Dichloropropene	BRL	2000 ug/l	2000	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	2000 ug/l	2000	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	2000 ug/l	2000	"	"	"	"	"	
Ethylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Hexachlorobutadiene	BRL	2000 ug/l	2000	"	"	"	"	"	
2-Hexanone (MBK)	BRL	20000 ug/l	2000	"	"	"	"	"	
Isopropylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
4-Isopropyltoluene	BRL	2000 ug/l	2000	"	"	"	"	"	
Methyl tert-butyl ether	BRL	2000 ug/l	2000	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	20000 ug/l	2000	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SA16375-01	4140	Ground Water	09-Aug-04 15:50	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method	Volatiles						
Methylene chloride	BRL	20000 ug/l	2000	SW846 8260B	12-Aug-04	12-Aug-04	4080682	RLJ	
Naphthalene	BRL	2000 ug/l	2000	"	"	"	"	"	
n-Propylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Styrene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	2000 ug/l	2000	"	"	"	"	"	
Tetrachloroethene	24,200	2000 ug/l	2000	"	"	"	"	"	
Toluene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,1,1-Trichloroethane	112,000	2000 ug/l	2000	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	2000 ug/l	2000	"	"	"	"	"	
Trichloroethene	128,000	2000 ug/l	2000	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	2000 ug/l	2000	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	2000 ug/l	2000	"	"	"	"	"	
Vinyl chloride	BRL	2000 ug/l	2000	"	"	"	"	"	
m,p-Xylene	BRL	4000 ug/l	2000	"	"	"	"	"	
o-Xylene	BRL	2000 ug/l	2000	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*91.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*103*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*102*	*70-130 %*		"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-3 SA16375-02	4140	Ground Water	09-Aug-04 15:15	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Acetone	BRL	2000 ug/l	100	SW846 8260B	13-Aug-04	13-Aug-04	4080722	RLJ	
Acrylonitrile	BRL	100 ug/l	100	"	"	"	"	"	
Benzene	BRL	100 ug/l	100	"	"	"	"	"	
Bromobenzene	BRL	100 ug/l	100	"	"	"	"	"	
Bromochloromethane	BRL	100 ug/l	100	"	"	"	"	"	
Bromodichloromethane	BRL	100 ug/l	100	"	"	"	"	"	
Bromoform	BRL	100 ug/l	100	"	"	"	"	"	
Bromomethane	BRL	200 ug/l	100	"	"	"	"	"	
2-Butanone (MEK)	BRL	1000 ug/l	100	"	"	"	"	"	
n-Butylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
sec-Butylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
tert-Butylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Carbon disulfide	BRL	500 ug/l	100	"	"	"	"	"	
Carbon tetrachloride	BRL	100 ug/l	100	"	"	"	"	"	
Chlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
Chloroethane	BRL	200 ug/l	100	"	"	"	"	"	
Chloroform	BRL	100 ug/l	100	"	"	"	"	"	
Chloromethane	BRL	200 ug/l	100	"	"	"	"	"	
2-Chlorotoluene	BRL	100 ug/l	100	"	"	"	"	"	
4-Chlorotoluene	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	200 ug/l	100	"	"	"	"	"	
Dibromochloromethane	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	100 ug/l	100	"	"	"	"	"	
Dibromomethane	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	200 ug/l	100	"	"	"	"	"	
1,1-Dichloroethane	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dichloroethane	BRL	100 ug/l	100	"	"	"	"	"	
1,1-Dichloroethene	BRL	100 ug/l	100	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	100 ug/l	100	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
1,3-Dichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
2,2-Dichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
1,1-Dichloropropene	BRL	100 ug/l	100	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	100 ug/l	100	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	100 ug/l	100	"	"	"	"	"	
Ethylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Hexachlorobutadiene	BRL	100 ug/l	100	"	"	"	"	"	
2-Hexanone (MBK)	BRL	1000 ug/l	100	"	"	"	"	"	
Isopropylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
4-Isopropyltoluene	BRL	100 ug/l	100	"	"	"	"	"	
Methyl tert-butyl ether	BRL	100 ug/l	100	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	1000 ug/l	100	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-3 SA16375-02	4140	Ground Water	09-Aug-04 15:15	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method		Volatiles					
Methylene chloride	BRL	1000 ug/l	100	SW846 8260B	13-Aug-04	13-Aug-04	4080722	RLJ	
Naphthalene	BRL	100 ug/l	100	"	"	"	"	"	
n-Propylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Styrene	BRL	100 ug/l	100	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	100 ug/l	100	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	100 ug/l	100	"	"	"	"	"	
Tetrachloroethene	16,200	100 ug/l	100	"	"	"	"	"	
Toluene	BRL	100 ug/l	100	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,1,1-Trichloroethane	BRL	100 ug/l	100	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	100 ug/l	100	"	"	"	"	"	
Trichloroethene	BRL	100 ug/l	100	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	100 ug/l	100	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Vinyl chloride	BRL	100 ug/l	100	"	"	"	"	"	
m,p-Xylene	BRL	200 ug/l	100	"	"	"	"	"	
o-Xylene	BRL	100 ug/l	100	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*90.4*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*103*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*109*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*106*	*70-130 %*		"	"	"	"	"	

*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SH-1 SA16375-03	4140	Ground Water	09-Aug-04 14:25	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method		Volatiles					
Acetone	BRL	4000 ug/l	200	SW846 8260B	13-Aug-04	13-Aug-04	4080722	RLJ	
Acrylonitrile	BRL	200 ug/l	200	"	"	"	"	"	
Benzene	BRL	200 ug/l	200	"	"	"	"	"	
Bromobenzene	BRL	200 ug/l	200	"	"	"	"	"	
Bromochloromethane	BRL	200 ug/l	200	"	"	"	"	"	
Bromodichloromethane	BRL	200 ug/l	200	"	"	"	"	"	
Bromoform	BRL	200 ug/l	200	"	"	"	"	"	
Bromomethane	BRL	400 ug/l	200	"	"	"	"	"	
2-Butanone (MEK)	BRL	2000 ug/l	200	"	"	"	"	"	
n-Butylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
sec-Butylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
tert-Butylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
Carbon disulfide	BRL	1000 ug/l	200	"	"	"	"	"	
Carbon tetrachloride	BRL	200 ug/l	200	"	"	"	"	"	
Chlorobenzene	BRL	200 ug/l	200	"	"	"	"	"	
Chloroethane	BRL	400 ug/l	200	"	"	"	"	"	
Chloroform	BRL	200 ug/l	200	"	"	"	"	"	
Chloromethane	BRL	400 ug/l	200	"	"	"	"	"	
2-Chlorotoluene	BRL	200 ug/l	200	"	"	"	"	"	
4-Chlorotoluene	BRL	200 ug/l	200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	400 ug/l	200	"	"	"	"	"	
Dibromochloromethane	BRL	200 ug/l	200	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	200 ug/l	200	"	"	"	"	"	
Dibromomethane	BRL	200 ug/l	200	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	200 ug/l	200	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	200 ug/l	200	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	200 ug/l	200	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	400 ug/l	200	"	"	"	"	"	
1,1-Dichloroethane	BRL	200 ug/l	200	"	"	"	"	"	
1,2-Dichloroethane	BRL	200 ug/l	200	"	"	"	"	"	
1,1-Dichloroethene	BRL	200 ug/l	200	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	200 ug/l	200	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	200 ug/l	200	"	"	"	"	"	
1,2-Dichloropropane	BRL	200 ug/l	200	"	"	"	"	"	
1,3-Dichloropropane	BRL	200 ug/l	200	"	"	"	"	"	
2,2-Dichloropropane	BRL	200 ug/l	200	"	"	"	"	"	
1,1-Dichloropropene	BRL	200 ug/l	200	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	200 ug/l	200	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	200 ug/l	200	"	"	"	"	"	
Ethylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
Hexachlorobutadiene	BRL	200 ug/l	200	"	"	"	"	"	
2-Hexanone (MBK)	BRL	2000 ug/l	200	"	"	"	"	"	
Isopropylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
4-Isopropyltoluene	BRL	200 ug/l	200	"	"	"	"	"	
Methyl tert-butyl ether	BRL	200 ug/l	200	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	2000 ug/l	200	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SH-1 SA16375-03	4140	Ground Water	09-Aug-04 14:25	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method		Volatiles					
Methylene chloride	BRL	2000 ug/l	200	SW846 8260B	13-Aug-04	13-Aug-04	4080722	RLJ	
Naphthalene	BRL	200 ug/l	200	"	"	"	"	"	
n-Propylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
Styrene	BRL	200 ug/l	200	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	200 ug/l	200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	200 ug/l	200	"	"	"	"	"	
Tetrachloroethene	49,700	200 ug/l	200	"	"	"	"	"	
Toluene	BRL	200 ug/l	200	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	200 ug/l	200	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	200 ug/l	200	"	"	"	"	"	
1,1,1-Trichloroethane	1,150	200 ug/l	200	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	200 ug/l	200	"	"	"	"	"	
Trichloroethene	906	200 ug/l	200	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	200 ug/l	200	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	200 ug/l	200	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	200 ug/l	200	"	"	"	"	"	
Vinyl chloride	BRL	200 ug/l	200	"	"	"	"	"	
m,p-Xylene	BRL	400 ug/l	200	"	"	"	"	"	
o-Xylene	BRL	200 ug/l	200	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*89.0*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*102*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*106*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*108*	*70-130 %*		"	"	"	"	"	

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Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SH-3 SA16375-04	4140	Ground Water	09-Aug-04 14:05	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method	Volatiles						
Acetone	BRL	2000 ug/l	100	SW846 8260B	13-Aug-04	13-Aug-04	4080722	RLJ	
Acrylonitrile	BRL	100 ug/l	100	"	"	"	"	"	
Benzene	BRL	100 ug/l	100	"	"	"	"	"	
Bromobenzene	BRL	100 ug/l	100	"	"	"	"	"	
Bromochloromethane	BRL	100 ug/l	100	"	"	"	"	"	
Bromodichloromethane	BRL	100 ug/l	100	"	"	"	"	"	
Bromoform	BRL	100 ug/l	100	"	"	"	"	"	
Bromomethane	BRL	200 ug/l	100	"	"	"	"	"	
2-Butanone (MEK)	BRL	1000 ug/l	100	"	"	"	"	"	
n-Butylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
sec-Butylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
tert-Butylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Carbon disulfide	BRL	500 ug/l	100	"	"	"	"	"	
Carbon tetrachloride	BRL	100 ug/l	100	"	"	"	"	"	
Chlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
Chloroethane	BRL	200 ug/l	100	"	"	"	"	"	
Chloroform	BRL	100 ug/l	100	"	"	"	"	"	
Chloromethane	BRL	200 ug/l	100	"	"	"	"	"	
2-Chlorotoluene	BRL	100 ug/l	100	"	"	"	"	"	
4-Chlorotoluene	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	200 ug/l	100	"	"	"	"	"	
Dibromochloromethane	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	100 ug/l	100	"	"	"	"	"	
Dibromomethane	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	200 ug/l	100	"	"	"	"	"	
1,1-Dichloroethane	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dichloroethane	BRL	100 ug/l	100	"	"	"	"	"	
1,1-Dichloroethene	BRL	100 ug/l	100	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	100 ug/l	100	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	100 ug/l	100	"	"	"	"	"	
1,2-Dichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
1,3-Dichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
2,2-Dichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
1,1-Dichloropropene	BRL	100 ug/l	100	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	100 ug/l	100	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	100 ug/l	100	"	"	"	"	"	
Ethylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Hexachlorobutadiene	BRL	100 ug/l	100	"	"	"	"	"	
2-Hexanone (MBK)	BRL	1000 ug/l	100	"	"	"	"	"	
Isopropylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
4-Isopropyltoluene	BRL	100 ug/l	100	"	"	"	"	"	
Methyl tert-butyl ether	BRL	100 ug/l	100	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	1000 ug/l	100	"	"	"	"	"	

*Reportable Detection Limit   BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SH-3 SA16375-04	4140	Ground Water	09-Aug-04 14:05	10-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Methylene chloride	BRL	1000 ug/l	100	SW846 8260B	13-Aug-04	13-Aug-04	4080722	RLJ	
Naphthalene	BRL	100 ug/l	100	"	"	"	"	"	
n-Propylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Styrene	BRL	100 ug/l	100	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	100 ug/l	100	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	100 ug/l	100	"	"	"	"	"	
Tetrachloroethene	19,500	100 ug/l	100	"	"	"	"	"	
Toluene	BRL	100 ug/l	100	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,1,1-Trichloroethane	2,070	100 ug/l	100	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	100 ug/l	100	"	"	"	"	"	
Trichloroethene	1,440	100 ug/l	100	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	100 ug/l	100	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	100 ug/l	100	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	100 ug/l	100	"	"	"	"	"	
Vinyl chloride	BRL	100 ug/l	100	"	"	"	"	"	
m,p-Xylene	BRL	200 ug/l	100	"	"	"	"	"	
o-Xylene	BRL	100 ug/l	100	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*89.8*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*99.2*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*107*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*106*	*70-130 %*		"	"	"	"	"	

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*Reportable Detection Limit   BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4080682 - Volatiles										
Blank (4080682-BLK1)				Prepared & Analyzed: 12-Aug-04						
Acetone	BRL	20.0	ug/l							
Acrylonitrile	BRL	1.0	ug/l							
Benzene	BRL	1.0	ug/l							
Bromobenzene	BRL	1.0	ug/l							
Bromochloromethane	BRL	1.0	ug/l							
Bromodichloromethane	BRL	1.0	ug/l							
Bromoform	BRL	1.0	ug/l							
Bromomethane	BRL	2.0	ug/l							
2-Butanone (MEK)	BRL	10.0	ug/l							
n-Butylbenzene	BRL	1.0	ug/l							
sec-Butylbenzene	BRL	1.0	ug/l							
tert-Butylbenzene	BRL	1.0	ug/l							
Carbon disulfide	BRL	5.0	ug/l							
Carbon tetrachloride	BRL	1.0	ug/l							
Chlorobenzene	BRL	1.0	ug/l							
Chloroethane	BRL	2.0	ug/l							
Chloroform	BRL	1.0	ug/l							
Chloromethane	BRL	2.0	ug/l							
2-Chlorotoluene	BRL	1.0	ug/l							
4-Chlorotoluene	BRL	1.0	ug/l							
1,2-Dibromo-3-chloropropane	BRL	2.0	ug/l							
Dibromochloromethane	BRL	1.0	ug/l							
1,2-Dibromoethane (EDB)	BRL	1.0	ug/l							
Dibromomethane	BRL	1.0	ug/l							
1,2-Dichlorobenzene	BRL	1.0	ug/l							
1,3-Dichlorobenzene	BRL	1.0	ug/l							
1,4-Dichlorobenzene	BRL	1.0	ug/l							
Dichlorodifluoromethane (Freon12)	BRL	2.0	ug/l							
1,1-Dichloroethane	BRL	1.0	ug/l							
1,2-Dichloroethane	BRL	1.0	ug/l							
1,1-Dichloroethene	BRL	1.0	ug/l							
cis-1,2-Dichloroethene	BRL	1.0	ug/l							
trans-1,2-Dichloroethene	BRL	1.0	ug/l							
1,2-Dichloropropane	BRL	1.0	ug/l							
1,3-Dichloropropane	BRL	1.0	ug/l							
2,2-Dichloropropane	BRL	1.0	ug/l							
1,1-Dichloropropene	BRL	1.0	ug/l							
cis-1,3-Dichloropropene	BRL	1.0	ug/l							
trans-1,3-Dichloropropene	BRL	1.0	ug/l							
Ethylbenzene	BRL	1.0	ug/l							
Hexachlorobutadiene	BRL	1.0	ug/l							
2-Hexanone (MBK)	BRL	10.0	ug/l							
Isopropylbenzene	BRL	1.0	ug/l							
4-Isopropyltoluene	BRL	1.0	ug/l							
Methyl tert-butyl ether	BRL	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	BRL	10.0	ug/l							
Methylene chloride	BRL	10.0	ug/l							
Naphthalene	BRL	1.0	ug/l							
n-Propylbenzene	BRL	1.0	ug/l							
Styrene	BRL	1.0	ug/l							
1,1,1,2-Tetrachloroethane	BRL	1.0	ug/l							
1,1,2,2-Tetrachloroethane	BRL	1.0	ug/l							
Tetrachloroethene	BRL	1.0	ug/l							
Toluene	BRL	1.0	ug/l							

*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4080682 - Volatiles										
Blank (4080682-BLK1)				Prepared & Analyzed: 12-Aug-04						
1,2,3-Trichlorobenzene	BRL	1.0	ug/l							
1,2,4-Trichlorobenzene	BRL	1.0	ug/l							
1,1,1-Trichloroethane	BRL	1.0	ug/l							
1,1,2-Trichloroethane	BRL	1.0	ug/l							
Trichloroethene	BRL	1.0	ug/l							
Trichlorofluoromethane (Freon 11)	BRL	1.0	ug/l							
1,2,3-Trichloropropane	BRL	1.0	ug/l							
1,2,4-Trimethylbenzene	BRL	1.0	ug/l							
1,3,5-Trimethylbenzene	BRL	1.0	ug/l							
Vinyl chloride	BRL	1.0	ug/l							
m,p-Xylene	BRL	2.0	ug/l							
o-Xylene	BRL	1.0	ug/l							
Surrogate: 4-Bromofluorobenzene	*44.9*		ug/l	*50.0*		*89.8*	*70-130*			
Surrogate: Toluene-d8	*55.4*		ug/l	*50.0*		*111*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*48.8*		ug/l	*50.0*		*97.6*	*70-130*			
Surrogate: Dibromofluoromethane	*44.0*		ug/l	*50.0*		*88.0*	*70-130*			
LCS Dup (4080682-BSD1)				Prepared & Analyzed: 12-Aug-04						
Acetone	24.8		ug/l	20.0		124	70-130	1.63	50	
Acrylonitrile	21.2		ug/l	20.0		106	70-130	1.90	25	
Benzene	19.2		ug/l	20.0		96.0	70-130	0.00	25	
Bromobenzene	20.4		ug/l	20.0		102	70-130	7.63	25	
Bromochloromethane	20.4		ug/l	20.0		102	70-130	4.00	25	
Bromodichloromethane	20.4		ug/l	20.0		102	70-130	2.99	25	
Bromoform	21.1		ug/l	20.0		106	70-130	13.1	25	
Bromomethane	19.6		ug/l	20.0		98.0	70-130	2.06	50	
2-Butanone (MEK)	16.7		ug/l	20.0		83.5	70-130	1.81	50	
n-Butylbenzene	17.0		ug/l	20.0		85.0	70-130	5.16	25	
sec-Butylbenzene	20.4		ug/l	20.0		102	70-130	4.00	25	
tert-Butylbenzene	20.6		ug/l	20.0		103	70-130	7.04	25	
Carbon disulfide	19.8		ug/l	20.0		99.0	70-130	4.93	25	
Carbon tetrachloride	20.5		ug/l	20.0		102	70-130	1.98	25	
Chlorobenzene	20.6		ug/l	20.0		103	70-130	7.56	25	
Chloroethane	21.4		ug/l	20.0		107	70-130	0.939	50	
Chloroform	19.9		ug/l	20.0		99.5	70-130	2.03	25	
Chloromethane	17.4		ug/l	20.0		87.0	70-130	2.83	25	
2-Chlorotoluene	21.4		ug/l	20.0		107	70-130	8.27	25	
4-Chlorotoluene	20.1		ug/l	20.0		100	70-130	5.66	25	
1,2-Dibromo-3-chloropropane	19.4		ug/l	20.0		97.0	70-130	8.04	25	
Dibromochloromethane	20.7		ug/l	20.0		104	70-130	6.45	50	
1,2-Dibromoethane (EDB)	19.3		ug/l	20.0		96.5	70-130	5.32	25	
Dibromomethane	20.2		ug/l	20.0		101	70-130	4.56	25	
1,2-Dichlorobenzene	19.2		ug/l	20.0		96.0	70-130	0.00	25	
1,3-Dichlorobenzene	20.8		ug/l	20.0		104	70-130	8.00	25	
1,4-Dichlorobenzene	19.1		ug/l	20.0		95.5	70-130	1.04	25	
Dichlorodifluoromethane (Freon12)	16.7		ug/l	20.0		83.5	70-130	4.91	50	
1,1-Dichloroethane	19.4		ug/l	20.0		97.0	70-130	2.54	25	
1,2-Dichloroethane	20.7		ug/l	20.0		104	70-130	7.48	25	
1,1-Dichloroethene	20.0		ug/l	20.0		100	70-130	1.98	25	
cis-1,2-Dichloroethene	21.2		ug/l	20.0		106	70-130	1.90	25	
trans-1,2-Dichloroethene	19.0		ug/l	20.0		95.0	70-130	8.08	25	
1,2-Dichloropropane	19.6		ug/l	20.0		98.0	70-130	0.00	25	
1,3-Dichloropropane	21.2		ug/l	20.0		106	70-130	7.84	25	
2,2-Dichloropropane	21.9		ug/l	20.0		110	70-130	3.57	25	
1,1-Dichloropropene	17.6		ug/l	20.0		88.0	70-130	4.44	25	

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*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4080682 - Volatiles										
LCS Dup (4080682-BSD1)				Prepared & Analyzed: 12-Aug-04						
cis-1,3-Dichloropropene	18.3		ug/l	20.0		91.5	70-130	3.75	25	
trans-1,3-Dichloropropene	19.6		ug/l	20.0		98.0	70-130	1.02	25	
Ethylbenzene	19.1		ug/l	20.0		95.5	70-130	5.38	25	
Hexachlorobutadiene	18.3		ug/l	20.0		91.5	70-130	2.70	50	
2-Hexanone (MBK)	15.5		ug/l	20.0		77.5	70-130	7.36	25	
Isopropylbenzene	20.2		ug/l	20.0		101	70-130	6.12	25	
4-Isopropyltoluene	19.0		ug/l	20.0		95.0	70-130	3.62	25	
Methyl tert-butyl ether	17.1		ug/l	20.0		85.5	70-130	6.65	25	
4-Methyl-2-pentanone (MIBK)	16.6		ug/l	20.0		83.0	70-130	4.31	50	
Methylene chloride	21.0		ug/l	20.0		105	70-130	2.90	25	
Naphthalene	14.2		ug/l	20.0		71.0	70-130	0.00	25	
n-Propylbenzene	19.0		ug/l	20.0		95.0	70-130	1.06	25	
Styrene	19.5		ug/l	20.0		97.5	70-130	6.90	25	
1,1,1,2-Tetrachloroethane	20.6		ug/l	20.0		103	70-130	6.52	25	
1,1,2,2-Tetrachloroethane	22.4		ug/l	20.0		112	70-130	14.4	25	
Tetrachloroethene	19.1		ug/l	20.0		95.5	70-130	0.525	25	
Toluene	20.3		ug/l	20.0		102	70-130	1.98	25	
1,2,3-Trichlorobenzene	16.1		ug/l	20.0		80.5	70-130	0.00	25	
1,2,4-Trichlorobenzene	14.4		ug/l	20.0		72.0	70-130	5.41	25	
1,1,1-Trichloroethane	19.7		ug/l	20.0		98.5	70-130	1.01	25	
1,1,2-Trichloroethane	20.8		ug/l	20.0		104	70-130	4.93	25	
Trichloroethene	18.9		ug/l	20.0		94.5	70-130	0.00	25	
Trichlorofluoromethane (Freon 11)	17.8		ug/l	20.0		89.0	70-130	4.40	50	
1,2,3-Trichloropropane	21.6		ug/l	20.0		108	70-130	13.3	25	
1,2,4-Trimethylbenzene	19.3		ug/l	20.0		96.5	70-130	5.87	25	
1,3,5-Trimethylbenzene	19.6		ug/l	20.0		98.0	70-130	5.24	25	
Vinyl chloride	23.7		ug/l	20.0		118	70-130	0.00	25	
m,p-Xylene	39.9		ug/l	40.0		99.8	70-130	6.20	25	
o-Xylene	21.5		ug/l	20.0		108	70-130	8.19	25	
Surrogate: 4-Bromofluorobenzene	*51.5*		ug/l	*50.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*51.3*		ug/l	*50.0*		*103*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*52.9*		ug/l	*50.0*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*50.7*		ug/l	*50.0*		*101*	*70-130*			
Matrix Spike (4080682-MS1)	Source: SA16382-04			Prepared & Analyzed: 12-Aug-04						
Benzene	16.4		ug/l	20.0	BRL	82.0	70-130			
Chlorobenzene	18.7		ug/l	20.0	BRL	93.5	70-130			
1,1-Dichloroethene	16.9		ug/l	20.0	BRL	84.5	70-130			
Toluene	18.6		ug/l	20.0	BRL	93.0	70-130			
Trichloroethene	17.0		ug/l	20.0	0.900	80.5	70-130			
Surrogate: 4-Bromofluorobenzene	*52.4*		ug/l	*50.0*		*105*	*70-130*			
Surrogate: Toluene-d8	*51.7*		ug/l	*50.0*		*103*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*53.8*		ug/l	*50.0*		*108*	*70-130*			
Surrogate: Dibromofluoromethane	*52.5*		ug/l	*50.0*		*105*	*70-130*			
Matrix Spike Dup (4080682-MSD1)	Source: SA16382-04			Prepared & Analyzed: 12-Aug-04						
Benzene	16.9		ug/l	20.0	BRL	84.5	70-130	3.00	30	
Chlorobenzene	17.5		ug/l	20.0	BRL	87.5	70-130	6.63	30	
1,1-Dichloroethene	17.8		ug/l	20.0	BRL	89.0	70-130	5.19	30	
Toluene	18.8		ug/l	20.0	BRL	94.0	70-130	1.07	30	
Trichloroethene	16.8		ug/l	20.0	0.900	79.5	70-130	1.25	30	
Surrogate: 4-Bromofluorobenzene	*48.8*		ug/l	*50.0*		*97.6*	*70-130*			
Surrogate: Toluene-d8	*50.7*		ug/l	*50.0*		*101*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*52.8*		ug/l	*50.0*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*49.0*		ug/l	*50.0*		*98.0*	*70-130*			

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*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4080722 - Volatiles										
Blank (4080722-BLK1)				Prepared & Analyzed: 12-Aug-04						
Acetone	BRL	20.0	ug/l							
Acrylonitrile	BRL	1.0	ug/l							
Benzene	BRL	1.0	ug/l							
Bromobenzene	BRL	1.0	ug/l							
Bromochloromethane	BRL	1.0	ug/l							
Bromodichloromethane	BRL	1.0	ug/l							
Bromoform	BRL	1.0	ug/l							
Bromomethane	BRL	2.0	ug/l							
2-Butanone (MEK)	BRL	10.0	ug/l							
n-Butylbenzene	BRL	1.0	ug/l							
sec-Butylbenzene	BRL	1.0	ug/l							
tert-Butylbenzene	BRL	1.0	ug/l							
Carbon disulfide	BRL	5.0	ug/l							
Carbon tetrachloride	BRL	1.0	ug/l							
Chlorobenzene	BRL	1.0	ug/l							
Chloroethane	BRL	2.0	ug/l							
Chloroform	BRL	1.0	ug/l							
Chloromethane	BRL	2.0	ug/l							
2-Chlorotoluene	BRL	1.0	ug/l							
4-Chlorotoluene	BRL	1.0	ug/l							
1,2-Dibromo-3-chloropropane	BRL	2.0	ug/l							
Dibromochloromethane	BRL	1.0	ug/l							
1,2-Dibromoethane (EDB)	BRL	1.0	ug/l							
Dibromomethane	BRL	1.0	ug/l							
1,2-Dichlorobenzene	BRL	1.0	ug/l							
1,3-Dichlorobenzene	BRL	1.0	ug/l							
1,4-Dichlorobenzene	BRL	1.0	ug/l							
Dichlorodifluoromethane (Freon12)	BRL	2.0	ug/l							
1,1-Dichloroethane	BRL	1.0	ug/l							
1,2-Dichloroethane	BRL	1.0	ug/l							
1,1-Dichloroethene	BRL	1.0	ug/l							
cis-1,2-Dichloroethene	BRL	1.0	ug/l							
trans-1,2-Dichloroethene	BRL	1.0	ug/l							
1,2-Dichloropropane	BRL	1.0	ug/l							
1,3-Dichloropropane	BRL	1.0	ug/l							
2,2-Dichloropropane	BRL	1.0	ug/l							
1,1-Dichloropropene	BRL	1.0	ug/l							
cis-1,3-Dichloropropene	BRL	1.0	ug/l							
trans-1,3-Dichloropropene	BRL	1.0	ug/l							
Ethylbenzene	BRL	1.0	ug/l							
Hexachlorobutadiene	BRL	1.0	ug/l							
2-Hexanone (MBK)	BRL	10.0	ug/l							
Isopropylbenzene	BRL	1.0	ug/l							
4-Isopropyltoluene	BRL	1.0	ug/l							
Methyl tert-butyl ether	BRL	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	BRL	10.0	ug/l							
Methylene chloride	BRL	10.0	ug/l							
Naphthalene	BRL	1.0	ug/l							
n-Propylbenzene	BRL	1.0	ug/l							
Styrene	BRL	1.0	ug/l							
1,1,1,2-Tetrachloroethane	BRL	1.0	ug/l							
1,1,2,2-Tetrachloroethane	BRL	1.0	ug/l							
Tetrachloroethene	BRL	1.0	ug/l							
Toluene	BRL	1.0	ug/l							

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4080722 - Volatiles										
Blank (4080722-BLK1)				Prepared & Analyzed: 12-Aug-04						
1,2,3-Trichlorobenzene	BRL	1.0	ug/l							
1,2,4-Trichlorobenzene	BRL	1.0	ug/l							
1,1,1-Trichloroethane	BRL	1.0	ug/l							
1,1,2-Trichloroethane	BRL	1.0	ug/l							
Trichloroethene	BRL	1.0	ug/l							
Trichlorofluoromethane (Freon 11)	BRL	1.0	ug/l							
1,2,3-Trichloropropane	BRL	1.0	ug/l							
1,2,4-Trimethylbenzene	BRL	1.0	ug/l							
1,3,5-Trimethylbenzene	BRL	1.0	ug/l							
Vinyl chloride	BRL	1.0	ug/l							
m,p-Xylene	BRL	2.0	ug/l							
o-Xylene	BRL	1.0	ug/l							
Surrogate: 4-Bromofluorobenzene	*48.4*		ug/l	*50.0*		*96.8*	*70-130*			
Surrogate: Toluene-d8	*51.6*		ug/l	*50.0*		*103*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*52.6*		ug/l	*50.0*		*105*	*70-130*			
Surrogate: Dibromofluoromethane	*52.3*		ug/l	*50.0*		*105*	*70-130*			
LCS Dup (4080722-BSD1)				Prepared: 12-Aug-04 Analyzed: 13-Aug-04						
Acetone	24.3		ug/l	20.0		122	70-130	10.3	50	
Acrylonitrile	21.4		ug/l	20.0		107	70-130	0.939	25	
Benzene	20.1		ug/l	20.0		100	70-130	1.51	25	
Bromobenzene	20.3		ug/l	20.0		102	70-130	5.71	25	
Bromochloromethane	21.6		ug/l	20.0		108	70-130	7.69	25	
Bromodichloromethane	21.3		ug/l	20.0		106	70-130	4.83	25	
Bromoform	19.8		ug/l	20.0		99.0	70-130	10.5	25	
Bromomethane	17.7		ug/l	20.0		88.5	70-130	13.2	50	
2-Butanone (MEK)	17.4		ug/l	20.0		87.0	70-130	5.31	50	
n-Butylbenzene	18.9		ug/l	20.0		94.5	70-130	4.32	25	
sec-Butylbenzene	20.4		ug/l	20.0		102	70-130	7.55	25	
tert-Butylbenzene	21.0		ug/l	20.0		105	70-130	3.74	25	
Carbon disulfide	20.4		ug/l	20.0		102	70-130	7.55	25	
Carbon tetrachloride	20.4		ug/l	20.0		102	70-130	4.78	25	
Chlorobenzene	19.8		ug/l	20.0		99.0	70-130	9.62	25	
Chloroethane	21.0		ug/l	20.0		105	70-130	2.82	50	
Chloroform	20.8		ug/l	20.0		104	70-130	3.92	25	
Chloromethane	17.6		ug/l	20.0		88.0	70-130	0.00	25	
2-Chlorotoluene	34.2		ug/l	20.0		171	70-130	40.0	25	QC-1
4-Chlorotoluene	19.4		ug/l	20.0		97.0	70-130	9.80	25	
1,2-Dibromo-3-chloropropane	18.7		ug/l	20.0		93.5	70-130	1.06	25	
Dibromochloromethane	21.4		ug/l	20.0		107	70-130	4.78	50	
1,2-Dibromoethane (EDB)	20.4		ug/l	20.0		102	70-130	6.58	25	
Dibromomethane	20.6		ug/l	20.0		103	70-130	7.56	25	
1,2-Dichlorobenzene	19.7		ug/l	20.0		98.5	70-130	1.51	25	
1,3-Dichlorobenzene	38.2		ug/l	20.0		191	70-130	55.5	25	QC-1
1,4-Dichlorobenzene	19.2		ug/l	20.0		96.0	70-130	4.08	25	
Dichlorodifluoromethane (Freon12)	14.3		ug/l	20.0		71.5	70-130	17.8	50	
1,1-Dichloroethane	20.7		ug/l	20.0		104	70-130	3.92	25	
1,2-Dichloroethane	20.7		ug/l	20.0		104	70-130	4.93	25	
1,1-Dichloroethene	20.7		ug/l	20.0		104	70-130	3.77	25	
cis-1,2-Dichloroethene	22.1		ug/l	20.0		110	70-130	3.70	25	
trans-1,2-Dichloroethene	20.7		ug/l	20.0		104	70-130	1.94	25	
1,2-Dichloropropane	20.8		ug/l	20.0		104	70-130	5.43	25	
1,3-Dichloropropane	21.2		ug/l	20.0		106	70-130	7.33	25	
2,2-Dichloropropane	20.9		ug/l	20.0		104	70-130	14.3	25	
1,1-Dichloropropene	19.4		ug/l	20.0		97.0	70-130	1.53	25	

This laboratory report is not valid without an authorized signature on the cover page.

*Reportable Detection Limit   BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4080722 - Volatiles										
LCS Dup (4080722-BSD1)				Prepared: 12-Aug-04 Analyzed: 13-Aug-04						
cis-1,3-Dichloropropene	21.1		ug/l	20.0		106	70-130	9.90	25	
trans-1,3-Dichloropropene	21.6		ug/l	20.0		108	70-130	6.70	25	
Ethylbenzene	19.2		ug/l	20.0		96.0	70-130	8.00	25	
Hexachlorobutadiene	19.2		ug/l	20.0		96.0	70-130	1.55	50	
2-Hexanone (MBK)	16.8		ug/l	20.0		84.0	70-130	15.4	25	
Isopropylbenzene	20.0		ug/l	20.0		100	70-130	9.52	25	
4-Isopropyltoluene	20.0		ug/l	20.0		100	70-130	1.98	25	
Methyl tert-butyl ether	17.6		ug/l	20.0		88.0	70-130	2.88	25	
4-Methyl-2-pentanone (MIBK)	17.8		ug/l	20.0		89.0	70-130	14.5	50	
Methylene chloride	21.6		ug/l	20.0		108	70-130	1.87	25	
Naphthalene	19.0		ug/l	20.0		95.0	70-130	28.9	25	QR-05
n-Propylbenzene	20.4		ug/l	20.0		102	70-130	0.00	25	
Styrene	19.5		ug/l	20.0		97.5	70-130	8.35	25	
1,1,1,2-Tetrachloroethane	20.8		ug/l	20.0		104	70-130	5.61	25	
1,1,2,2-Tetrachloroethane	20.2		ug/l	20.0		101	70-130	10.3	25	
Tetrachloroethene	19.8		ug/l	20.0		99.0	70-130	0.00	25	
Toluene	20.5		ug/l	20.0		102	70-130	0.00	25	
1,2,3-Trichlorobenzene	18.0		ug/l	20.0		90.0	70-130	8.09	25	
1,2,4-Trichlorobenzene	17.4		ug/l	20.0		87.0	70-130	13.5	25	
1,1,1-Trichloroethane	20.9		ug/l	20.0		104	70-130	0.00	25	
1,1,2-Trichloroethane	21.3		ug/l	20.0		106	70-130	5.83	25	
Trichloroethene	19.2		ug/l	20.0		96.0	70-130	1.55	25	
Trichlorofluoromethane (Freon 11)	18.5		ug/l	20.0		92.5	70-130	10.7	50	
1,2,3-Trichloropropane	18.7		ug/l	20.0		93.5	70-130	15.3	25	
1,2,4-Trimethylbenzene	20.1		ug/l	20.0		100	70-130	1.98	25	
1,3,5-Trimethylbenzene	48.3		ug/l	20.0		242	70-130	78.2	25	QC-1
Vinyl chloride	23.1		ug/l	20.0		116	70-130	1.71	25	
m,p-Xylene	39.4		ug/l	40.0		98.5	70-130	9.20	25	
o-Xylene	20.8		ug/l	20.0		104	70-130	9.17	25	
Surrogate: 4-Bromofluorobenzene	*46.3*		ug/l	*50.0*		*92.6*	*70-130*			
Surrogate: Toluene-d8	*49.5*		ug/l	*50.0*		*99.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*50.7*		ug/l	*50.0*		*101*	*70-130*			
Surrogate: Dibromofluoromethane	*51.1*		ug/l	*50.0*		*102*	*70-130*			
Matrix Spike (4080722-MS1)	Source: SA16243-02			Prepared: 12-Aug-04 Analyzed: 13-Aug-04						
Benzene	18.5		ug/l	20.0	BRL	92.5	70-130			
Chlorobenzene	21.0		ug/l	20.0	BRL	105	70-130			
1,1-Dichloroethene	17.1		ug/l	20.0	BRL	85.5	70-130			
Toluene	22.6		ug/l	20.0	BRL	113	70-130			
Trichloroethene	18.5		ug/l	20.0	BRL	92.5	70-130			
Surrogate: 4-Bromofluorobenzene	*53.4*		ug/l	*50.0*		*107*	*70-130*			
Surrogate: Toluene-d8	*52.1*		ug/l	*50.0*		*104*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*57.0*		ug/l	*50.0*		*114*	*70-130*			
Surrogate: Dibromofluoromethane	*55.2*		ug/l	*50.0*		*110*	*70-130*			
Matrix Spike Dup (4080722-MSD1)	Source: SA16243-02			Prepared: 12-Aug-04 Analyzed: 13-Aug-04						
Benzene	19.2		ug/l	20.0	BRL	96.0	70-130	3.71	30	
Chlorobenzene	21.6		ug/l	20.0	BRL	108	70-130	2.82	30	
1,1-Dichloroethene	17.0		ug/l	20.0	BRL	85.0	70-130	0.587	30	
Toluene	20.6		ug/l	20.0	BRL	103	70-130	9.26	30	
Trichloroethene	18.7		ug/l	20.0	BRL	93.5	70-130	1.08	30	
Surrogate: 4-Bromofluorobenzene	*52.5*		ug/l	*50.0*		*105*	*70-130*			
Surrogate: Toluene-d8	*52.0*		ug/l	*50.0*		*104*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*59.6*		ug/l	*50.0*		*119*	*70-130*			
Surrogate: Dibromofluoromethane	*55.9*		ug/l	*50.0*		*112*	*70-130*			

*Reportable Detection Limit   BRL = Below Reporting Limit

Notes and Definitions

QR-05	RPD out of acceptance range.
QC-1	Analyte out of acceptance range.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Dan DeAlmeida

SA 16375 MM

SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: 8-13-04
· All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: GeoInsight Inc.
319 Littleton Rd, Suite 105
Westford, MA 01886

Project Mgr.: MJW

Invoice To: GeoInsight, Inc
IWH4003382

P.O. No.: ____ RQN: ____

Project No.: 4190
Site Name: Tufts St.
Location: Somerville State: MA
Sampler(s): KHM

1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8= $NaHSO_4$ 9=____ 10=____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=____ X2=____ X3=____

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic		VOCs 8260B
16375-01	MW-1	8/9/04	3:50	G	GW	2	3					X
-02	MW-3	↓	3:15	G	GW	2	3					X
-03	SH-1	↓	2:25	G	GW	2	3					X
-04	SH-3	↓	2:05	G	GW	2	3					X

QA Reporting Notes:
(check if needed)

State specific reporting standards *If applicable, please list below.*

☐ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0?
☐ Yes ☐ No
(Response required for CAM report)

☒ Fax results when available to (978) 692-1115
☐ E-mail to ____
EDD Format ____
Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C 3

Relinquished by:	Received by:	Date:	Time:
		8/10/04	10:47
Randy		8/10/04	14:30

Report Date:
20-Aug-04 15:42

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

SPECTRUM ANALYTICAL, INC.
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Laboratory Report

GeoInsight, Inc.
319 Littleton Road; Suite 105
Westford, MA 01886
Attn: Jesse Freeman

Project:Tufts St-Somerville, MA
Project #:4140

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SA16665-01	Geo-4	Ground Water	16-Aug-04 11:10	17-Aug-04 14:10
SA16665-02	Geo-2	Ground Water	16-Aug-04 14:50	17-Aug-04 14:10
SA16665-03	Geo-1	Ground Water	16-Aug-04 15:40	17-Aug-04 14:10
SA16665-04	SH-MW-2	Ground Water	16-Aug-04 10:00	17-Aug-04 14:10
SA16665-05	Geo-6	Ground Water	16-Aug-04 11:20	17-Aug-04 14:10
SA16665-06	Geo-3	Ground Water	16-Aug-04 12:05	17-Aug-04 14:10
SA16665-07	Geo-5	Ground Water	16-Aug-04 16:20	17-Aug-04 14:10
SA16665-08	Geo-1 6-8	Soil	12-Aug-04 09:50	17-Aug-04 14:10
SA16665-09	Geo-4 11-13	Soil	13-Aug-04 11:15	17-Aug-04 14:10
SA16665-10	Geo-1 0-2	Soil	12-Aug-04 09:20	17-Aug-04 14:10

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. All applicable NELAC requirements have been met.
Please note that this report contains 32 pages of analytical data plus Chain of Custody document(s).
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Connecticut # PH-0777
Florida # E87600/E87936
Maine # MA138
New Hampshire # 2538
New York # 11393/11840
Rhode Island # 98

ACCREDITED IN ACCORDANCE WITH nelac

Authorized by:

Hanibal C. Tayeh, Ph.D.
President/Laboratory Director

Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method indicated. Please refer to our "Quality" webpage at www.spectrum-analytical.com for a full listing of our current certifications.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-4 SA16665-01	4140	Ground Water	16-Aug-04 11:10	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Acetone	BRL	2000 ug/l	200	SW846 8260B	18-Aug-04	18-Aug-04	4081053	kl	
Acrylonitrile	BRL	100 ug/l	200	"	"	"	"	"	
Benzene	BRL	100 ug/l	200	"	"	"	"	"	
Bromobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Bromochloromethane	BRL	100 ug/l	200	"	"	"	"	"	
Bromodichloromethane	BRL	100 ug/l	200	"	"	"	"	"	
Bromoform	BRL	100 ug/l	200	"	"	"	"	"	
Bromomethane	BRL	200 ug/l	200	"	"	"	"	"	
2-Butanone (MEK)	BRL	1000 ug/l	200	"	"	"	"	"	
n-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
sec-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
tert-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Carbon disulfide	BRL	500 ug/l	200	"	"	"	"	"	
Carbon tetrachloride	BRL	100 ug/l	200	"	"	"	"	"	
Chlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Chloroethane	BRL	200 ug/l	200	"	"	"	"	"	
Chloroform	BRL	100 ug/l	200	"	"	"	"	"	
Chloromethane	BRL	200 ug/l	200	"	"	"	"	"	
2-Chlorotoluene	BRL	100 ug/l	200	"	"	"	"	"	
4-Chlorotoluene	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	200 ug/l	200	"	"	"	"	"	
Dibromochloromethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	100 ug/l	200	"	"	"	"	"	
Dibromomethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	200 ug/l	200	"	"	"	"	"	
1,1-Dichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,1-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,3-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
2,2-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,1-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
Ethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Hexachlorobutadiene	BRL	100 ug/l	200	"	"	"	"	"	
2-Hexanone (MBK)	BRL	1000 ug/l	200	"	"	"	"	"	
Isopropylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
4-Isopropyltoluene	BRL	100 ug/l	200	"	"	"	"	"	
Methyl tert-butyl ether	BRL	100 ug/l	200	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	1000 ug/l	200	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-4 SA16665-01	4140	Ground Water	16-Aug-04 11:10	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Methylene chloride	BRL	1000 ug/l	200	SW846 8260B	18-Aug-04	18-Aug-04	4081053	kl	
Naphthalene	BRL	100 ug/l	200	"	"	"	"	"	
n-Propylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Styrene	BRL	100 ug/l	200	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	100 ug/l	200	"	"	"	"	"	
Tetrachloroethene	12,900	100 ug/l	200	"	"	"	"	"	
Toluene	BRL	100 ug/l	200	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,1,1-Trichloroethane	1,170	100 ug/l	200	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
Trichloroethene	720	100 ug/l	200	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	100 ug/l	200	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Vinyl chloride	BRL	100 ug/l	200	"	"	"	"	"	
m,p-Xylene	BRL	200 ug/l	200	"	"	"	"	"	
o-Xylene	BRL	100 ug/l	200	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*87.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*104*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*107*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*108*	*70-130 %*		"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-2 SA16665-02	4140	Ground Water	16-Aug-04 14:50	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Acetone	487	100 ug/l	5	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kl	
Acrylonitrile	BRL	5.0 ug/l	5	"	"	"	"	"	
Benzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Bromobenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Bromochloromethane	BRL	5.0 ug/l	5	"	"	"	"	"	
Bromodichloromethane	BRL	5.0 ug/l	5	"	"	"	"	"	
Bromoform	BRL	5.0 ug/l	5	"	"	"	"	"	
Bromomethane	BRL	10.0 ug/l	5	"	"	"	"	"	
2-Butanone (MEK)	BRL	50.0 ug/l	5	"	"	"	"	"	
n-Butylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
sec-Butylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
tert-Butylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Carbon disulfide	BRL	25.0 ug/l	5	"	"	"	"	"	
Carbon tetrachloride	BRL	5.0 ug/l	5	"	"	"	"	"	
Chlorobenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Chloroethane	BRL	10.0 ug/l	5	"	"	"	"	"	
Chloroform	BRL	5.0 ug/l	5	"	"	"	"	"	
Chloromethane	BRL	10.0 ug/l	5	"	"	"	"	"	
2-Chlorotoluene	BRL	5.0 ug/l	5	"	"	"	"	"	
4-Chlorotoluene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	10.0 ug/l	5	"	"	"	"	"	
Dibromochloromethane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	5.0 ug/l	5	"	"	"	"	"	
Dibromomethane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	10.0 ug/l	5	"	"	"	"	"	
1,1-Dichloroethane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2-Dichloroethane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,1-Dichloroethene	23.2	5.0 ug/l	5	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	5.0 ug/l	5	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2-Dichloropropane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,3-Dichloropropane	BRL	5.0 ug/l	5	"	"	"	"	"	
2,2-Dichloropropane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,1-Dichloropropene	BRL	5.0 ug/l	5	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	5.0 ug/l	5	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	5.0 ug/l	5	"	"	"	"	"	
Ethylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Hexachlorobutadiene	BRL	5.0 ug/l	5	"	"	"	"	"	
2-Hexanone (MBK)	BRL	50.0 ug/l	5	"	"	"	"	"	
Isopropylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
4-Isopropyltoluene	BRL	5.0 ug/l	5	"	"	"	"	"	
Methyl tert-butyl ether	37.6	5.0 ug/l	5	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	50.0 ug/l	5	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-2 SA16665-02	4140	Ground Water	16-Aug-04 14:50	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Methylene chloride	BRL	50.0 ug/l	5	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kl	
Naphthalene	BRL	5.0 ug/l	5	"	"	"	"	"	
n-Propylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Styrene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	5.0 ug/l	5	"	"	"	"	"	
Tetrachloroethene	285	5.0 ug/l	5	"	"	"	"	"	
Toluene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,1,1-Trichloroethane	490	5.0 ug/l	5	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	5.0 ug/l	5	"	"	"	"	"	
Trichloroethene	60.0	5.0 ug/l	5	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	5.0 ug/l	5	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	5.0 ug/l	5	"	"	"	"	"	
Vinyl chloride	BRL	5.0 ug/l	5	"	"	"	"	"	
m,p-Xylene	BRL	10.0 ug/l	5	"	"	"	"	"	
o-Xylene	BRL	5.0 ug/l	5	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.3*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*96.0*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*109*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	

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*Reportable Detection Limit   BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-1 SA16665-03	4140	Ground Water	16-Aug-04 15:40	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Acetone	BRL	400 ug/l	20	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kl	
Acrylonitrile	BRL	20.0 ug/l	20	"	"	"	"	"	
Benzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Bromobenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Bromochloromethane	BRL	20.0 ug/l	20	"	"	"	"	"	
Bromodichloromethane	BRL	20.0 ug/l	20	"	"	"	"	"	
Bromoform	BRL	20.0 ug/l	20	"	"	"	"	"	
Bromomethane	BRL	40.0 ug/l	20	"	"	"	"	"	
2-Butanone (MEK)	BRL	200 ug/l	20	"	"	"	"	"	
n-Butylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
sec-Butylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
tert-Butylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Carbon disulfide	BRL	100 ug/l	20	"	"	"	"	"	
Carbon tetrachloride	BRL	20.0 ug/l	20	"	"	"	"	"	
Chlorobenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Chloroethane	BRL	40.0 ug/l	20	"	"	"	"	"	
Chloroform	BRL	20.0 ug/l	20	"	"	"	"	"	
Chloromethane	BRL	40.0 ug/l	20	"	"	"	"	"	
2-Chlorotoluene	BRL	20.0 ug/l	20	"	"	"	"	"	
4-Chlorotoluene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	40.0 ug/l	20	"	"	"	"	"	
Dibromochloromethane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	20.0 ug/l	20	"	"	"	"	"	
Dibromomethane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	40.0 ug/l	20	"	"	"	"	"	
1,1-Dichloroethane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2-Dichloroethane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,1-Dichloroethene	39.8	20.0 ug/l	20	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	20.0 ug/l	20	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2-Dichloropropane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,3-Dichloropropane	BRL	20.0 ug/l	20	"	"	"	"	"	
2,2-Dichloropropane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,1-Dichloropropene	BRL	20.0 ug/l	20	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	20.0 ug/l	20	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	20.0 ug/l	20	"	"	"	"	"	
Ethylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Hexachlorobutadiene	BRL	20.0 ug/l	20	"	"	"	"	"	
2-Hexanone (MBK)	BRL	200 ug/l	20	"	"	"	"	"	
Isopropylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
4-Isopropyltoluene	BRL	20.0 ug/l	20	"	"	"	"	"	
Methyl tert-butyl ether	BRL	20.0 ug/l	20	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	200 ug/l	20	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-1 SA16665-03	4140	Ground Water	16-Aug-04 15:40	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Methylene chloride	BRL	200 ug/l	20	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kd	
Naphthalene	BRL	20.0 ug/l	20	"	"	"	"	"	
n-Propylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Styrene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	20.0 ug/l	20	"	"	"	"	"	
Tetrachloroethene	1,880	20.0 ug/l	20	"	"	"	"	"	
Toluene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,1,1-Trichloroethane	1,720	20.0 ug/l	20	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	20.0 ug/l	20	"	"	"	"	"	
Trichloroethene	898	20.0 ug/l	20	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	20.0 ug/l	20	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	20.0 ug/l	20	"	"	"	"	"	
Vinyl chloride	BRL	20.0 ug/l	20	"	"	"	"	"	
m,p-Xylene	BRL	40.0 ug/l	20	"	"	"	"	"	
o-Xylene	BRL	20.0 ug/l	20	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*94.0*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*97.0*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*111*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*109*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SH-MW-2 SA16665-04	4140	Ground Water	16-Aug-04 10:00	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method		Volatiles					
Acetone	BRL	2000 ug/l	200	SW846 8260B	18-Aug-04	19-Aug-04	4081053	kl	
Acrylonitrile	BRL	100 ug/l	200	"	"	"	"	"	
Benzene	BRL	100 ug/l	200	"	"	"	"	"	
Bromobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Bromochloromethane	BRL	100 ug/l	200	"	"	"	"	"	
Bromodichloromethane	BRL	100 ug/l	200	"	"	"	"	"	
Bromoform	BRL	100 ug/l	200	"	"	"	"	"	
Bromomethane	BRL	200 ug/l	200	"	"	"	"	"	
2-Butanone (MEK)	BRL	1000 ug/l	200	"	"	"	"	"	
n-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
sec-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
tert-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Carbon disulfide	BRL	500 ug/l	200	"	"	"	"	"	
Carbon tetrachloride	BRL	100 ug/l	200	"	"	"	"	"	
Chlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Chloroethane	BRL	200 ug/l	200	"	"	"	"	"	
Chloroform	BRL	100 ug/l	200	"	"	"	"	"	
Chloromethane	BRL	200 ug/l	200	"	"	"	"	"	
2-Chlorotoluene	BRL	100 ug/l	200	"	"	"	"	"	
4-Chlorotoluene	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	200 ug/l	200	"	"	"	"	"	
Dibromochloromethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	100 ug/l	200	"	"	"	"	"	
Dibromomethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	200 ug/l	200	"	"	"	"	"	
1,1-Dichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,1-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,3-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
2,2-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,1-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
Ethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Hexachlorobutadiene	BRL	100 ug/l	200	"	"	"	"	"	
2-Hexanone (MBK)	BRL	1000 ug/l	200	"	"	"	"	"	
Isopropylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
4-Isopropyltoluene	BRL	100 ug/l	200	"	"	"	"	"	
Methyl tert-butyl ether	BRL	100 ug/l	200	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	1000 ug/l	200	"	"	"	"	"	

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*Reportable Detection Limit   BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
SH-MW-2 SA16665-04	4140	Ground Water	16-Aug-04 10:00	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method	Volatiles						
Methylene chloride	BRL	1000 ug/l	200	SW846 8260B	18-Aug-04	19-Aug-04	4081053	kl	
Naphthalene	BRL	100 ug/l	200	"	"	"	"	"	
n-Propylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Styrene	BRL	100 ug/l	200	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	100 ug/l	200	"	"	"	"	"	
Tetrachloroethene	7,170	100 ug/l	200	"	"	"	"	"	
Toluene	BRL	100 ug/l	200	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,1,1-Trichloroethane	1,550	100 ug/l	200	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
Trichloroethene	572	100 ug/l	200	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	100 ug/l	200	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Vinyl chloride	BRL	100 ug/l	200	"	"	"	"	"	
m,p-Xylene	BRL	200 ug/l	200	"	"	"	"	"	
o-Xylene	BRL	100 ug/l	200	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*87.0*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*103*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*105*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*111*	*70-130 %*		"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-6 SA16665-05	4140	Ground Water	16-Aug-04 11:20	17-Aug-04

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260B Prepared by method Volatiles

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Acetone	BRL	200 ug/l	10	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kl	
Acrylonitrile	BRL	10.0 ug/l	10	"	"	"	"	"	
Benzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Bromobenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Bromochloromethane	BRL	10.0 ug/l	10	"	"	"	"	"	
Bromodichloromethane	BRL	10.0 ug/l	10	"	"	"	"	"	
Bromoform	BRL	10.0 ug/l	10	"	"	"	"	"	
Bromomethane	BRL	20.0 ug/l	10	"	"	"	"	"	
2-Butanone (MEK)	BRL	100 ug/l	10	"	"	"	"	"	
n-Butylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
sec-Butylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
tert-Butylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Carbon disulfide	BRL	50.0 ug/l	10	"	"	"	"	"	
Carbon tetrachloride	BRL	10.0 ug/l	10	"	"	"	"	"	
Chlorobenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Chloroethane	BRL	20.0 ug/l	10	"	"	"	"	"	
Chloroform	BRL	10.0 ug/l	10	"	"	"	"	"	
Chloromethane	BRL	20.0 ug/l	10	"	"	"	"	"	
2-Chlorotoluene	BRL	10.0 ug/l	10	"	"	"	"	"	
4-Chlorotoluene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	20.0 ug/l	10	"	"	"	"	"	
Dibromochloromethane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	10.0 ug/l	10	"	"	"	"	"	
Dibromomethane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	20.0 ug/l	10	"	"	"	"	"	
1,1-Dichloroethane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2-Dichloroethane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,1-Dichloroethene	BRL	10.0 ug/l	10	"	"	"	"	"	
cis-1,2-Dichloroethene	14.8	10.0 ug/l	10	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2-Dichloropropane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,3-Dichloropropane	BRL	10.0 ug/l	10	"	"	"	"	"	
2,2-Dichloropropane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,1-Dichloropropene	BRL	10.0 ug/l	10	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	10.0 ug/l	10	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	10.0 ug/l	10	"	"	"	"	"	
Ethylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Hexachlorobutadiene	BRL	10.0 ug/l	10	"	"	"	"	"	
2-Hexanone (MBK)	BRL	100 ug/l	10	"	"	"	"	"	
Isopropylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
4-Isopropyltoluene	BRL	10.0 ug/l	10	"	"	"	"	"	
Methyl tert-butyl ether	BRL	10.0 ug/l	10	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	100 ug/l	10	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-6 SA16665-05	4140	Ground Water	16-Aug-04 11:20	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method	Volatiles						
Methylene chloride	BRL	100 ug/l	10	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kl	
Naphthalene	BRL	10.0 ug/l	10	"	"	"	"	"	
n-Propylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Styrene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	10.0 ug/l	10	"	"	"	"	"	
Tetrachloroethene	782	10.0 ug/l	10	"	"	"	"	"	
Toluene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,1,1-Trichloroethane	27.8	10.0 ug/l	10	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	10.0 ug/l	10	"	"	"	"	"	
Trichloroethene	122	10.0 ug/l	10	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	10.0 ug/l	10	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	10.0 ug/l	10	"	"	"	"	"	
Vinyl chloride	BRL	10.0 ug/l	10	"	"	"	"	"	
m,p-Xylene	BRL	20.0 ug/l	10	"	"	"	"	"	
o-Xylene	BRL	10.0 ug/l	10	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*94.7*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*96.3*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*119*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*112*	*70-130 %*		"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-3 SA16665-06	4140	Ground Water	16-Aug-04 12:05	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Acetone	BRL	1000 ug/l	50	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kl	
Acrylonitrile	BRL	50.0 ug/l	50	"	"	"	"	"	
Benzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Bromobenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Bromochloromethane	BRL	50.0 ug/l	50	"	"	"	"	"	
Bromodichloromethane	BRL	50.0 ug/l	50	"	"	"	"	"	
Bromoform	BRL	50.0 ug/l	50	"	"	"	"	"	
Bromomethane	BRL	100 ug/l	50	"	"	"	"	"	
2-Butanone (MEK)	BRL	500 ug/l	50	"	"	"	"	"	
n-Butylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
sec-Butylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
tert-Butylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Carbon disulfide	BRL	250 ug/l	50	"	"	"	"	"	
Carbon tetrachloride	BRL	50.0 ug/l	50	"	"	"	"	"	
Chlorobenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Chloroethane	BRL	100 ug/l	50	"	"	"	"	"	
Chloroform	BRL	50.0 ug/l	50	"	"	"	"	"	
Chloromethane	BRL	100 ug/l	50	"	"	"	"	"	
2-Chlorotoluene	BRL	50.0 ug/l	50	"	"	"	"	"	
4-Chlorotoluene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	100 ug/l	50	"	"	"	"	"	
Dibromochloromethane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	50.0 ug/l	50	"	"	"	"	"	
Dibromomethane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	100 ug/l	50	"	"	"	"	"	
1,1-Dichloroethane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2-Dichloroethane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,1-Dichloroethene	108	50.0 ug/l	50	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	50.0 ug/l	50	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2-Dichloropropane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,3-Dichloropropane	BRL	50.0 ug/l	50	"	"	"	"	"	
2,2-Dichloropropane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,1-Dichloropropene	BRL	50.0 ug/l	50	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	50.0 ug/l	50	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	50.0 ug/l	50	"	"	"	"	"	
Ethylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Hexachlorobutadiene	BRL	50.0 ug/l	50	"	"	"	"	"	
2-Hexanone (MBK)	BRL	500 ug/l	50	"	"	"	"	"	
Isopropylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
4-Isopropyltoluene	BRL	50.0 ug/l	50	"	"	"	"	"	
Methyl tert-butyl ether	BRL	50.0 ug/l	50	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	500 ug/l	50	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-3 SA16665-06	4140	Ground Water	16-Aug-04 12:05	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method		Volatiles					
Methylene chloride	BRL	500 ug/l	50	SW846 8260B	19-Aug-04	19-Aug-04	4081120	kl	
Naphthalene	BRL	50.0 ug/l	50	"	"	"	"	"	
n-Propylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Styrene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	50.0 ug/l	50	"	"	"	"	"	
Tetrachloroethene	4,020	50.0 ug/l	50	"	"	"	"	"	
Toluene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,1,1-Trichloroethane	204	50.0 ug/l	50	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	50.0 ug/l	50	"	"	"	"	"	
Trichloroethene	507	50.0 ug/l	50	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	50.0 ug/l	50	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	50.0 ug/l	50	"	"	"	"	"	
Vinyl chloride	BRL	50.0 ug/l	50	"	"	"	"	"	
m,p-Xylene	BRL	100 ug/l	50	"	"	"	"	"	
o-Xylene	BRL	50.0 ug/l	50	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.3*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*96.0*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*111*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-5 SA16665-07	4140	Ground Water	16-Aug-04 16:20	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method Volatiles							
Acetone	BRL	2000 ug/l	200	SW846 8260B	18-Aug-04	19-Aug-04	4081053	kl	
Acrylonitrile	BRL	100 ug/l	200	"	"	"	"	"	
Benzene	BRL	100 ug/l	200	"	"	"	"	"	
Bromobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Bromochloromethane	BRL	100 ug/l	200	"	"	"	"	"	
Bromodichloromethane	BRL	100 ug/l	200	"	"	"	"	"	
Bromoform	BRL	100 ug/l	200	"	"	"	"	"	
Bromomethane	BRL	200 ug/l	200	"	"	"	"	"	
2-Butanone (MEK)	BRL	1000 ug/l	200	"	"	"	"	"	
n-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
sec-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
tert-Butylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Carbon disulfide	BRL	500 ug/l	200	"	"	"	"	"	
Carbon tetrachloride	BRL	100 ug/l	200	"	"	"	"	"	
Chlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Chloroethane	BRL	200 ug/l	200	"	"	"	"	"	
Chloroform	BRL	100 ug/l	200	"	"	"	"	"	
Chloromethane	BRL	200 ug/l	200	"	"	"	"	"	
2-Chlorotoluene	BRL	100 ug/l	200	"	"	"	"	"	
4-Chlorotoluene	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	200 ug/l	200	"	"	"	"	"	
Dibromochloromethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	100 ug/l	200	"	"	"	"	"	
Dibromomethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	200 ug/l	200	"	"	"	"	"	
1,1-Dichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,1-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	100 ug/l	200	"	"	"	"	"	
1,2-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,3-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
2,2-Dichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,1-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	100 ug/l	200	"	"	"	"	"	
Ethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Hexachlorobutadiene	BRL	100 ug/l	200	"	"	"	"	"	
2-Hexanone (MBK)	BRL	1000 ug/l	200	"	"	"	"	"	
Isopropylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
4-Isopropyltoluene	BRL	100 ug/l	200	"	"	"	"	"	
Methyl tert-butyl ether	BRL	100 ug/l	200	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	BRL	1000 ug/l	200	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-5 SA16665-07	4140	Ground Water	16-Aug-04 16:20	17-Aug-04

Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260B Prepared by method Volatiles

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Methylene chloride	BRL	1000 ug/l	200	SW846 8260B	18-Aug-04	19-Aug-04	4081053	kl	
Naphthalene	BRL	100 ug/l	200	"	"	"	"	"	
n-Propylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Styrene	BRL	100 ug/l	200	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	100 ug/l	200	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	100 ug/l	200	"	"	"	"	"	
Tetrachloroethene	14,400	100 ug/l	200	"	"	"	"	"	
Toluene	BRL	100 ug/l	200	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,1,1-Trichloroethane	646	100 ug/l	200	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	100 ug/l	200	"	"	"	"	"	
Trichloroethene	404	100 ug/l	200	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	100 ug/l	200	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	100 ug/l	200	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	100 ug/l	200	"	"	"	"	"	
Vinyl chloride	BRL	100 ug/l	200	"	"	"	"	"	
m,p-Xylene	BRL	200 ug/l	200	"	"	"	"	"	
o-Xylene	BRL	100 ug/l	200	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*85.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*101*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*107*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*110*	*70-130 %*		"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-1 6-8 SA16665-08	4140	Soil	12-Aug-04 09:50	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
VOC Extraction	Field extracted	N/A	1	VOC	18-Aug-04	18-Aug-04	4081074	LN	
Volatile Organic Compounds by SW846 8260B	Prepared by method SW846 5030 Soil (high level)								VOC10
Acetone	BRL	1900 ug/kg dry	100	SW846 8260B	19-Aug-04	19-Aug-04	4081098	tim	
Acrylonitrile	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Benzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Bromobenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Bromochloromethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Bromodichloromethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Bromoform	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Bromomethane	BRL	190 ug/kg dry	100	"	"	"	"	"	
2-Butanone (MEK)	BRL	950 ug/kg dry	100	"	"	"	"	"	
n-Butylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
sec-Butylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
tert-Butylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Carbon disulfide	BRL	475 ug/kg dry	100	"	"	"	"	"	
Carbon tetrachloride	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Chlorobenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Chloroethane	BRL	190 ug/kg dry	100	"	"	"	"	"	
Chloroform	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Chloromethane	BRL	190 ug/kg dry	100	"	"	"	"	"	
2-Chlorotoluene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
4-Chlorotoluene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	190 ug/kg dry	100	"	"	"	"	"	
Dibromochloromethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Dibromomethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	190 ug/kg dry	100	"	"	"	"	"	
1,1-Dichloroethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2-Dichloroethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,1-Dichloroethene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2-Dichloropropane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,3-Dichloropropane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
2,2-Dichloropropane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,1-Dichloropropene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Ethylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Hexachlorobutadiene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
2-Hexanone (MBK)	BRL	950 ug/kg dry	100	"	"	"	"	"	
Isopropylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
4-Isopropyltoluene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Methyl tert-butyl ether	BRL	95.0 ug/kg dry	100	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-1 6-8 SA16665-08	4140	Soil	12-Aug-04 09:50	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)							VOC10
4-Methyl-2-pentanone (MIBK)	BRL	950 ug/kg dry	100	SW846 8260B	19-Aug-04	19-Aug-04	4081098	tim	
Methylene chloride	BRL	950 ug/kg dry	100	"	"	"	"	"	
Naphthalene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
n-Propylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Styrene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Tetrachloroethene	8,070	95.0 ug/kg dry	100	"	"	"	"	"	
Toluene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,1,1-Trichloroethane	1,330	95.0 ug/kg dry	100	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Trichloroethene	1,120	95.0 ug/kg dry	100	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Vinyl chloride	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
m,p-Xylene	BRL	190 ug/kg dry	100	"	"	"	"	"	
o-Xylene	BRL	95.0 ug/kg dry	100	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*83.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*96.8*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*107*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*111*	*70-130 %*		"	"	"	"	"	
General Chemistry Parameters									
% Solids	91.7	%	1	SM2540 G Mod.	18-Aug-04	18-Aug-04	4081035	AW	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-4 11-13 SA16665-09	4140	Soil	13-Aug-04 11:15	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
VOC Extraction	Field extracted	N/A	1	VOC	18-Aug-04	18-Aug-04	4081074	LN	
Volatile Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)							
Acetone	BRL	1110 ug/kg dry	50	SW846 8260B	19-Aug-04	19-Aug-04	4081098	tim	
Acrylonitrile	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Benzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Bromobenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Bromochloromethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Bromodichloromethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Bromoform	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Bromomethane	BRL	111 ug/kg dry	50	"	"	"	"	"	
2-Butanone (MEK)	BRL	556 ug/kg dry	50	"	"	"	"	"	
n-Butylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
sec-Butylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
tert-Butylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Carbon disulfide	BRL	278 ug/kg dry	50	"	"	"	"	"	
Carbon tetrachloride	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Chlorobenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Chloroethane	BRL	111 ug/kg dry	50	"	"	"	"	"	
Chloroform	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Chloromethane	BRL	111 ug/kg dry	50	"	"	"	"	"	
2-Chlorotoluene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
4-Chlorotoluene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	111 ug/kg dry	50	"	"	"	"	"	
Dibromochloromethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Dibromomethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	111 ug/kg dry	50	"	"	"	"	"	
1,1-Dichloroethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2-Dichloroethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,1-Dichloroethene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2-Dichloropropane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,3-Dichloropropane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
2,2-Dichloropropane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,1-Dichloropropene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Ethylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Hexachlorobutadiene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
2-Hexanone (MBK)	BRL	556 ug/kg dry	50	"	"	"	"	"	
Isopropylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
4-Isopropyltoluene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Methyl tert-butyl ether	BRL	55.6 ug/kg dry	50	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-4 11-13 SA16665-09	4140	Soil	13-Aug-04 11:15	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)							
4-Methyl-2-pentanone (MIBK)	BRL	556 ug/kg dry	50	SW846 8260B	19-Aug-04	19-Aug-04	4081098	tim	
Methylene chloride	BRL	556 ug/kg dry	50	"	"	"	"	"	
Naphthalene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
n-Propylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Styrene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Tetrachloroethene	111	55.6 ug/kg dry	50	"	"	"	"	"	
Toluene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,1,1-Trichloroethane	79.5	55.6 ug/kg dry	50	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Trichloroethene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Vinyl chloride	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
m,p-Xylene	BRL	111 ug/kg dry	50	"	"	"	"	"	
o-Xylene	BRL	55.6 ug/kg dry	50	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*86.2*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*96.0*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*104*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*109*	*70-130 %*		"	"	"	"	"	
General Chemistry Parameters									
% Solids	90.4	%	1	SM2540 G Mod.	18-Aug-04	18-Aug-04	4081035	AW	

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*Reportable Detection Limit   BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-1 0-2 SA16665-10	4140	Soil	12-Aug-04 09:20	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
VOC Extraction	Field extracted	N/A	1	VOC	18-Aug-04	18-Aug-04	4081074	LN	
Volatile Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)							VOC10
Acetone	BRL	1350 ug/kg dry	50	SW846 8260B	19-Aug-04	19-Aug-04	4081098	tim	
Acrylonitrile	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Benzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Bromobenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Bromochloromethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Bromodichloromethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Bromoform	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Bromomethane	BRL	135 ug/kg dry	50	"	"	"	"	"	
2-Butanone (MEK)	BRL	673 ug/kg dry	50	"	"	"	"	"	
n-Butylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
sec-Butylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
tert-Butylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Carbon disulfide	BRL	336 ug/kg dry	50	"	"	"	"	"	
Carbon tetrachloride	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Chlorobenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Chloroethane	BRL	135 ug/kg dry	50	"	"	"	"	"	
Chloroform	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Chloromethane	BRL	135 ug/kg dry	50	"	"	"	"	"	
2-Chlorotoluene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
4-Chlorotoluene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	BRL	135 ug/kg dry	50	"	"	"	"	"	
Dibromochloromethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2-Dibromoethane (EDB)	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Dibromomethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2-Dichlorobenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,3-Dichlorobenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,4-Dichlorobenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Dichlorodifluoromethane (Freon12)	BRL	135 ug/kg dry	50	"	"	"	"	"	
1,1-Dichloroethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2-Dichloroethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,1-Dichloroethene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
cis-1,2-Dichloroethene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
trans-1,2-Dichloroethene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2-Dichloropropane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,3-Dichloropropane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
2,2-Dichloropropane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,1-Dichloropropene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
cis-1,3-Dichloropropene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
trans-1,3-Dichloropropene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Ethylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Hexachlorobutadiene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
2-Hexanone (MBK)	BRL	673 ug/kg dry	50	"	"	"	"	"	
Isopropylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
4-Isopropyltoluene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Methyl tert-butyl ether	BRL	67.3 ug/kg dry	50	"	"	"	"	"	

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*Reportable Detection Limit BRL = Below Reporting Limit

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Geo-1 0-2 SA16665-10	4140	Soil	12-Aug-04 09:20	17-Aug-04

Analyte(s)	*Result*	**RDL/Units*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Batch*	*Analyst*	*Flag*
Volatile Organic Compounds									
Volatile Organic Compounds by SW846 8260B		Prepared by method SW846 5030 Soil (high level)							VOC10
4-Methyl-2-pentanone (MIBK)	BRL	673 ug/kg dry	50	SW846 8260B	19-Aug-04	19-Aug-04	4081098	tim	
Methylene chloride	BRL	673 ug/kg dry	50	"	"	"	"	"	
Naphthalene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
n-Propylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Styrene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Tetrachloroethene	2,450	67.3 ug/kg dry	50	"	"	"	"	"	
Toluene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2,3-Trichlorobenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2,4-Trichlorobenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,1,1-Trichloroethane	145	67.3 ug/kg dry	50	"	"	"	"	"	
1,1,2-Trichloroethane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Trichloroethene	164	67.3 ug/kg dry	50	"	"	"	"	"	
Trichlorofluoromethane (Freon 11)	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2,3-Trichloropropane	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,2,4-Trimethylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
1,3,5-Trimethylbenzene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Vinyl chloride	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
m,p-Xylene	BRL	135 ug/kg dry	50	"	"	"	"	"	
o-Xylene	BRL	67.3 ug/kg dry	50	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	*83.6*	*70-130 %*		"	"	"	"	"	
Surrogate: Toluene-d8	*94.2*	*70-130 %*		"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*102*	*70-130 %*		"	"	"	"	"	
Surrogate: Dibromofluoromethane	*107*	*70-130 %*		"	"	"	"	"	
General Chemistry Parameters									
% Solids	93.7	%	1	SM2540 G Mod.	18-Aug-04	18-Aug-04	4081035	AW	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081053 - Volatiles										
Blank (4081053-BLK1)				Prepared & Analyzed: 18-Aug-04						
Acetone	BRL	20.0	ug/l							
Acrylonitrile	BRL	1.0	ug/l							
Benzene	BRL	1.0	ug/l							
Bromobenzene	BRL	1.0	ug/l							
Bromochloromethane	BRL	1.0	ug/l							
Bromodichloromethane	BRL	1.0	ug/l							
Bromoform	BRL	1.0	ug/l							
Bromomethane	BRL	2.0	ug/l							
2-Butanone (MEK)	BRL	10.0	ug/l							
n-Butylbenzene	BRL	1.0	ug/l							
sec-Butylbenzene	BRL	1.0	ug/l							
tert-Butylbenzene	BRL	1.0	ug/l							
Carbon disulfide	BRL	5.0	ug/l							
Carbon tetrachloride	BRL	1.0	ug/l							
Chlorobenzene	BRL	1.0	ug/l							
Chloroethane	BRL	2.0	ug/l							
Chloroform	BRL	1.0	ug/l							
Chloromethane	BRL	2.0	ug/l							
2-Chlorotoluene	BRL	1.0	ug/l							
4-Chlorotoluene	BRL	1.0	ug/l							
1,2-Dibromo-3-chloropropane	BRL	2.0	ug/l							
Dibromochloromethane	BRL	1.0	ug/l							
1,2-Dibromoethane (EDB)	BRL	1.0	ug/l							
Dibromomethane	BRL	1.0	ug/l							
1,2-Dichlorobenzene	BRL	1.0	ug/l							
1,3-Dichlorobenzene	BRL	1.0	ug/l							
1,4-Dichlorobenzene	BRL	1.0	ug/l							
Dichlorodifluoromethane (Freon12)	BRL	2.0	ug/l							
1,1-Dichloroethane	BRL	1.0	ug/l							
1,2-Dichloroethane	BRL	1.0	ug/l							
1,1-Dichloroethene	BRL	1.0	ug/l							
cis-1,2-Dichloroethene	BRL	1.0	ug/l							
trans-1,2-Dichloroethene	BRL	1.0	ug/l							
1,2-Dichloropropane	BRL	1.0	ug/l							
1,3-Dichloropropane	BRL	1.0	ug/l							
2,2-Dichloropropane	BRL	1.0	ug/l							
1,1-Dichloropropene	BRL	1.0	ug/l							
cis-1,3-Dichloropropene	BRL	1.0	ug/l							
trans-1,3-Dichloropropene	BRL	1.0	ug/l							
Ethylbenzene	BRL	1.0	ug/l							
Hexachlorobutadiene	BRL	1.0	ug/l							
2-Hexanone (MBK)	BRL	10.0	ug/l							
Isopropylbenzene	BRL	1.0	ug/l							
4-Isopropyltoluene	BRL	1.0	ug/l							
Methyl tert-butyl ether	BRL	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	BRL	10.0	ug/l							
Methylene chloride	BRL	10.0	ug/l							
Naphthalene	BRL	1.0	ug/l							
n-Propylbenzene	BRL	1.0	ug/l							
Styrene	BRL	1.0	ug/l							
1,1,1,2-Tetrachloroethane	BRL	1.0	ug/l							
1,1,2,2-Tetrachloroethane	BRL	1.0	ug/l							
Tetrachloroethene	BRL	1.0	ug/l							
Toluene	BRL	1.0	ug/l							

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081053 - Volatiles										
Blank (4081053-BLK1)				Prepared & Analyzed: 18-Aug-04						
1,2,3-Trichlorobenzene	BRL	1.0	ug/l							
1,2,4-Trichlorobenzene	BRL	1.0	ug/l							
1,1,1-Trichloroethane	BRL	1.0	ug/l							
1,1,2-Trichloroethane	BRL	1.0	ug/l							
Trichloroethene	BRL	1.0	ug/l							
Trichlorofluoromethane (Freon 11)	BRL	1.0	ug/l							
1,2,3-Trichloropropane	BRL	1.0	ug/l							
1,2,4-Trimethylbenzene	BRL	1.0	ug/l							
1,3,5-Trimethylbenzene	BRL	1.0	ug/l							
Vinyl chloride	BRL	1.0	ug/l							
m,p-Xylene	BRL	2.0	ug/l							
o-Xylene	BRL	1.0	ug/l							
Surrogate: 4-Bromofluorobenzene	*45.6*		ug/l	*50.0*		*91.2*	*70-130*			
Surrogate: Toluene-d8	*53.0*		ug/l	*50.0*		*106*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*54.8*		ug/l	*50.0*		*110*	*70-130*			
Surrogate: Dibromofluoromethane	*53.6*		ug/l	*50.0*		*107*	*70-130*			
LCS Dup (4081053-BSD1)				Prepared & Analyzed: 18-Aug-04						
Acetone	41.3		ug/l	20.0		206	70-130	18.0	50	QC-1
Acrylonitrile	26.1		ug/l	20.0		130	70-130	4.72	25	
Benzene	18.5		ug/l	20.0		92.5	70-130	5.77	25	
Bromobenzene	18.8		ug/l	20.0		94.0	70-130	2.62	25	
Bromochloromethane	20.8		ug/l	20.0		104	70-130	7.41	25	
Bromodichloromethane	20.1		ug/l	20.0		100	70-130	7.69	25	
Bromoform	19.6		ug/l	20.0		98.0	70-130	3.02	25	
Bromomethane	24.3		ug/l	20.0		122	70-130	0.00	50	
2-Butanone (MEK)	23.9		ug/l	20.0		120	70-130	5.67	50	
n-Butylbenzene	16.8		ug/l	20.0		84.0	70-130	2.93	25	
sec-Butylbenzene	18.6		ug/l	20.0		93.0	70-130	1.07	25	
tert-Butylbenzene	18.4		ug/l	20.0		92.0	70-130	0.542	25	
Carbon disulfide	17.0		ug/l	20.0		85.0	70-130	8.99	25	
Carbon tetrachloride	18.6		ug/l	20.0		93.0	70-130	9.23	25	
Chlorobenzene	18.2		ug/l	20.0		91.0	70-130	1.09	25	
Chloroethane	21.9		ug/l	20.0		110	70-130	5.31	50	
Chloroform	18.9		ug/l	20.0		94.5	70-130	5.15	25	
Chloromethane	25.7		ug/l	20.0		128	70-130	1.57	25	
2-Chlorotoluene	17.9		ug/l	20.0		89.5	70-130	1.66	25	
4-Chlorotoluene	18.2		ug/l	20.0		91.0	70-130	0.551	25	
1,2-Dibromo-3-chloropropane	16.8		ug/l	20.0		84.0	70-130	1.20	25	
Dibromochloromethane	23.4		ug/l	20.0		117	70-130	1.69	50	
1,2-Dibromoethane (EDB)	22.6		ug/l	20.0		113	70-130	1.79	25	
Dibromomethane	21.0		ug/l	20.0		105	70-130	0.00	25	
1,2-Dichlorobenzene	19.2		ug/l	20.0		96.0	70-130	0.519	25	
1,3-Dichlorobenzene	20.4		ug/l	20.0		102	70-130	3.49	25	
1,4-Dichlorobenzene	18.6		ug/l	20.0		93.0	70-130	4.21	25	
Dichlorodifluoromethane (Freon12)	23.9		ug/l	20.0		120	70-130	11.0	50	
1,1-Dichloroethane	19.1		ug/l	20.0		95.5	70-130	6.58	25	
1,2-Dichloroethane	19.7		ug/l	20.0		98.5	70-130	5.43	25	
1,1-Dichloroethene	19.4		ug/l	20.0		97.0	70-130	7.92	25	
cis-1,2-Dichloroethene	17.8		ug/l	20.0		89.0	70-130	11.1	25	
trans-1,2-Dichloroethene	17.1		ug/l	20.0		85.5	70-130	8.94	25	
1,2-Dichloropropane	19.1		ug/l	20.0		95.5	70-130	3.60	25	
1,3-Dichloropropane	21.6		ug/l	20.0		108	70-130	0.00	25	
2,2-Dichloropropane	18.8		ug/l	20.0		94.0	70-130	5.18	25	
1,1-Dichloropropene	17.5		ug/l	20.0		87.5	70-130	6.09	25	

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*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081053 - Volatiles										
LCS Dup (4081053-BSD1)				Prepared & Analyzed: 18-Aug-04						
cis-1,3-Dichloropropene	19.4		ug/l	20.0		97.0	70-130	5.03	25	
trans-1,3-Dichloropropene	20.6		ug/l	20.0		103	70-130	0.966	25	
Ethylbenzene	16.8		ug/l	20.0		84.0	70-130	1.77	25	
Hexachlorobutadiene	16.4		ug/l	20.0		82.0	70-130	4.76	50	
2-Hexanone (MBK)	35.1		ug/l	20.0		176	70-130	7.06	25	QC-1
Isopropylbenzene	17.7		ug/l	20.0		88.5	70-130	2.79	25	
4-Isopropyltoluene	19.8		ug/l	20.0		99.0	70-130	0.504	25	
Methyl tert-butyl ether	18.8		ug/l	20.0		94.0	70-130	3.14	25	
4-Methyl-2-pentanone (MIBK)	25.5		ug/l	20.0		128	70-130	3.98	50	
Methylene chloride	21.3		ug/l	20.0		106	70-130	1.87	25	
Naphthalene	18.5		ug/l	20.0		92.5	70-130	3.19	25	
n-Propylbenzene	17.0		ug/l	20.0		85.0	70-130	1.75	25	
Styrene	17.9		ug/l	20.0		89.5	70-130	1.11	25	
1,1,1,2-Tetrachloroethane	17.3		ug/l	20.0		86.5	70-130	6.70	25	
1,1,2,2-Tetrachloroethane	20.9		ug/l	20.0		104	70-130	3.92	25	
Tetrachloroethene	20.6		ug/l	20.0		103	70-130	0.966	25	
Toluene	20.6		ug/l	20.0		103	70-130	0.00	25	
1,2,3-Trichlorobenzene	17.5		ug/l	20.0		87.5	70-130	5.56	25	
1,2,4-Trichlorobenzene	16.7		ug/l	20.0		83.5	70-130	2.95	25	
1,1,1-Trichloroethane	19.0		ug/l	20.0		95.0	70-130	7.11	25	
1,1,2-Trichloroethane	21.9		ug/l	20.0		110	70-130	0.00	25	
Trichloroethene	19.0		ug/l	20.0		95.0	70-130	0.00	25	
Trichlorofluoromethane (Freon 11)	21.9		ug/l	20.0		110	70-130	10.3	50	
1,2,3-Trichloropropane	20.0		ug/l	20.0		100	70-130	1.51	25	
1,2,4-Trimethylbenzene	19.4		ug/l	20.0		97.0	70-130	1.56	25	
1,3,5-Trimethylbenzene	18.2		ug/l	20.0		91.0	70-130	1.63	25	
Vinyl chloride	30.5		ug/l	20.0		152	70-130	1.32	25	QC-1
m,p-Xylene	34.6		ug/l	40.0		86.5	70-130	4.52	25	
o-Xylene	18.2		ug/l	20.0		91.0	70-130	1.63	25	
Surrogate: 4-Bromofluorobenzene	*45.4*		ug/l	*50.0*		*90.8*	*70-130*			
Surrogate: Toluene-d8	*54.8*		ug/l	*50.0*		*110*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*50.2*		ug/l	*50.0*		*100*	*70-130*			
Surrogate: Dibromofluoromethane	*51.0*		ug/l	*50.0*		*102*	*70-130*			
Matrix Spike (4081053-MS1)	Source: SA16662-03			Prepared & Analyzed: 18-Aug-04						
Benzene	19.6		ug/l	20.0	BRL	98.0	70-130			
Chlorobenzene	18.5		ug/l	20.0	BRL	92.5	70-130			
1,1-Dichloroethene	20.9		ug/l	20.0	BRL	104	70-130			
Toluene	20.5		ug/l	20.0	BRL	102	70-130			
Trichloroethene	19.1		ug/l	20.0	BRL	95.5	70-130			
Surrogate: 4-Bromofluorobenzene	*43.8*		ug/l	*50.0*		*87.6*	*70-130*			
Surrogate: Toluene-d8	*52.4*		ug/l	*50.0*		*105*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*53.2*		ug/l	*50.0*		*106*	*70-130*			
Surrogate: Dibromofluoromethane	*52.4*		ug/l	*50.0*		*105*	*70-130*			
Matrix Spike Dup (4081053-MSD1)	Source: SA16662-03			Prepared & Analyzed: 18-Aug-04						
Benzene	21.1		ug/l	20.0	BRL	106	70-130	7.84	30	
Chlorobenzene	19.9		ug/l	20.0	BRL	99.5	70-130	7.29	30	
1,1-Dichloroethene	21.9		ug/l	20.0	BRL	110	70-130	5.61	30	
Toluene	21.3		ug/l	20.0	BRL	106	70-130	3.85	30	
Trichloroethene	21.0		ug/l	20.0	BRL	105	70-130	9.48	30	
Surrogate: 4-Bromofluorobenzene	*43.4*		ug/l	*50.0*		*86.8*	*70-130*			
Surrogate: Toluene-d8	*51.9*		ug/l	*50.0*		*104*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/l	*50.0*		*105*	*70-130*			
Surrogate: Dibromofluoromethane	*52.4*		ug/l	*50.0*		*105*	*70-130*			

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*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Batch 4081098 - SW846 5030 Soil (high level)

Blank (4081098-BLK1) Prepared & Analyzed: 19-Aug-04

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Acetone	BRL	20.0	ug/kg wet							
Acrylonitrile	BRL	1.0	ug/kg wet							
Benzene	BRL	1.0	ug/kg wet							
Bromobenzene	BRL	1.0	ug/kg wet							
Bromochloromethane	BRL	1.0	ug/kg wet							
Bromodichloromethane	BRL	1.0	ug/kg wet							
Bromoform	BRL	1.0	ug/kg wet							
Bromomethane	BRL	2.0	ug/kg wet							
2-Butanone (MEK)	BRL	10.0	ug/kg wet							
n-Butylbenzene	BRL	1.0	ug/kg wet							
sec-Butylbenzene	BRL	1.0	ug/kg wet							
tert-Butylbenzene	BRL	1.0	ug/kg wet							
Carbon disulfide	BRL	5.0	ug/kg wet							
Carbon tetrachloride	BRL	1.0	ug/kg wet							
Chlorobenzene	BRL	1.0	ug/kg wet							
Chloroethane	BRL	2.0	ug/kg wet							
Chloroform	BRL	1.0	ug/kg wet							
Chloromethane	BRL	2.0	ug/kg wet							
2-Chlorotoluene	BRL	1.0	ug/kg wet							
4-Chlorotoluene	BRL	1.0	ug/kg wet							
1,2-Dibromo-3-chloropropane	BRL	2.0	ug/kg wet							
Dibromochloromethane	BRL	1.0	ug/kg wet							
1,2-Dibromoethane (EDB)	BRL	1.0	ug/kg wet							
Dibromomethane	BRL	1.0	ug/kg wet							
1,2-Dichlorobenzene	BRL	1.0	ug/kg wet							
1,3-Dichlorobenzene	BRL	1.0	ug/kg wet							
1,4-Dichlorobenzene	BRL	1.0	ug/kg wet							
Dichlorodifluoromethane (Freon12)	BRL	2.0	ug/kg wet							
1,1-Dichloroethane	BRL	1.0	ug/kg wet							
1,2-Dichloroethane	BRL	1.0	ug/kg wet							
1,1-Dichloroethene	BRL	1.0	ug/kg wet							
cis-1,2-Dichloroethene	BRL	1.0	ug/kg wet							
trans-1,2-Dichloroethene	BRL	1.0	ug/kg wet							
1,2-Dichloropropane	BRL	1.0	ug/kg wet							
1,3-Dichloropropane	BRL	1.0	ug/kg wet							
2,2-Dichloropropane	BRL	1.0	ug/kg wet							
1,1-Dichloropropene	BRL	1.0	ug/kg wet							
cis-1,3-Dichloropropene	BRL	1.0	ug/kg wet							
trans-1,3-Dichloropropene	BRL	1.0	ug/kg wet							
Ethylbenzene	BRL	1.0	ug/kg wet							
Hexachlorobutadiene	BRL	1.0	ug/kg wet							
2-Hexanone (MBK)	BRL	10.0	ug/kg wet							
Isopropylbenzene	BRL	1.0	ug/kg wet							
4-Isopropyltoluene	BRL	1.0	ug/kg wet							
Methyl tert-butyl ether	BRL	1.0	ug/kg wet							
4-Methyl-2-pentanone (MIBK)	BRL	10.0	ug/kg wet							
Methylene chloride	BRL	10.0	ug/kg wet							
Naphthalene	BRL	1.0	ug/kg wet							
n-Propylbenzene	BRL	1.0	ug/kg wet							
Styrene	BRL	1.0	ug/kg wet							
1,1,1,2-Tetrachloroethane	BRL	1.0	ug/kg wet							
1,1,2,2-Tetrachloroethane	BRL	1.0	ug/kg wet							
Tetrachloroethene	BRL	1.0	ug/kg wet							
Toluene	BRL	1.0	ug/kg wet							

*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081098 - SW846 5030 Soil (high level)										
Blank (4081098-BLK1)				Prepared & Analyzed: 19-Aug-04						
1,2,3-Trichlorobenzene	BRL	1.0	ug/kg wet							
1,2,4-Trichlorobenzene	BRL	1.0	ug/kg wet							
1,1,1-Trichloroethane	BRL	1.0	ug/kg wet							
1,1,2-Trichloroethane	BRL	1.0	ug/kg wet							
Trichloroethene	BRL	1.0	ug/kg wet							
Trichlorofluoromethane (Freon 11)	BRL	1.0	ug/kg wet							
1,2,3-Trichloropropane	BRL	1.0	ug/kg wet							
1,2,4-Trimethylbenzene	BRL	1.0	ug/kg wet							
1,3,5-Trimethylbenzene	BRL	1.0	ug/kg wet							
Vinyl chloride	BRL	1.0	ug/kg wet							
m,p-Xylene	BRL	2.0	ug/kg wet							
o-Xylene	BRL	1.0	ug/kg wet							
Surrogate: 4-Bromofluorobenzene	*42.9*		ug/kg wet	*50.0*		*85.8*	*70-130*			
Surrogate: Toluene-d8	*52.8*		ug/kg wet	*50.0*		*106*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.7*		ug/kg wet	*50.0*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*53.6*		ug/kg wet	*50.0*		*107*	*70-130*			
LCS Dup (4081098-BSD1)				Prepared & Analyzed: 19-Aug-04						
Acetone	25.9		ug/kg wet	20.0		130	70-130	18.5	50	
Acrylonitrile	25.2		ug/kg wet	20.0		126	70-130	2.35	25	
Benzene	19.6		ug/kg wet	20.0		98.0	70-130	4.00	25	
Bromobenzene	18.6		ug/kg wet	20.0		93.0	70-130	0.539	25	
Bromochloromethane	22.7		ug/kg wet	20.0		114	70-130	0.873	25	
Bromodichloromethane	21.0		ug/kg wet	20.0		105	70-130	0.948	25	
Bromoform	18.9		ug/kg wet	20.0		94.5	70-130	0.528	25	
Bromomethane	25.4		ug/kg wet	20.0		127	70-130	2.39	50	
2-Butanone (MEK)	24.8		ug/kg wet	20.0		124	70-130	0.00	50	
n-Butylbenzene	16.8		ug/kg wet	20.0		84.0	70-130	2.93	25	
sec-Butylbenzene	18.2		ug/kg wet	20.0		91.0	70-130	4.30	25	
tert-Butylbenzene	18.3		ug/kg wet	20.0		91.5	70-130	4.28	25	
Carbon disulfide	19.6		ug/kg wet	20.0		98.0	70-130	1.02	25	
Carbon tetrachloride	21.2		ug/kg wet	20.0		106	70-130	1.87	25	
Chlorobenzene	18.7		ug/kg wet	20.0		93.5	70-130	1.06	25	
Chloroethane	23.6		ug/kg wet	20.0		118	70-130	3.33	50	
Chloroform	20.6		ug/kg wet	20.0		103	70-130	0.976	25	
Chloromethane	24.7		ug/kg wet	20.0		124	70-130	3.95	25	
2-Chlorotoluene	17.4		ug/kg wet	20.0		87.0	70-130	2.83	25	
4-Chlorotoluene	17.4		ug/kg wet	20.0		87.0	70-130	1.71	25	
1,2-Dibromo-3-chloropropane	16.5		ug/kg wet	20.0		82.5	70-130	3.57	25	
Dibromochloromethane	22.6		ug/kg wet	20.0		113	70-130	2.62	50	
1,2-Dibromoethane (EDB)	21.3		ug/kg wet	20.0		106	70-130	0.939	25	
Dibromomethane	21.6		ug/kg wet	20.0		108	70-130	2.82	25	
1,2-Dichlorobenzene	18.6		ug/kg wet	20.0		93.0	70-130	1.07	25	
1,3-Dichlorobenzene	19.0		ug/kg wet	20.0		95.0	70-130	5.13	25	
1,4-Dichlorobenzene	18.7		ug/kg wet	20.0		93.5	70-130	2.12	25	
Dichlorodifluoromethane (Freon12)	24.5		ug/kg wet	20.0		122	70-130	4.80	50	
1,1-Dichloroethane	21.2		ug/kg wet	20.0		106	70-130	1.87	25	
1,2-Dichloroethane	20.1		ug/kg wet	20.0		100	70-130	2.96	25	
1,1-Dichloroethene	23.1		ug/kg wet	20.0		116	70-130	1.74	25	
cis-1,2-Dichloroethene	19.9		ug/kg wet	20.0		99.5	70-130	4.42	25	
trans-1,2-Dichloroethene	19.8		ug/kg wet	20.0		99.0	70-130	0.00	25	
1,2-Dichloropropane	19.9		ug/kg wet	20.0		99.5	70-130	0.501	25	
1,3-Dichloropropane	20.8		ug/kg wet	20.0		104	70-130	0.00	25	
2,2-Dichloropropane	20.1		ug/kg wet	20.0		100	70-130	1.98	25	
1,1-Dichloropropene	19.2		ug/kg wet	20.0		96.0	70-130	0.519	25	

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*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081098 - SW846 5030 Soil (high level)										
LCS Dup (4081098-BSD1)				Prepared & Analyzed: 19-Aug-04						
cis-1,3-Dichloropropene	19.6		ug/kg wet	20.0		98.0	70-130	3.02	25	
trans-1,3-Dichloropropene	19.8		ug/kg wet	20.0		99.0	70-130	2.99	25	
Ethylbenzene	17.0		ug/kg wet	20.0		85.0	70-130	2.90	25	
Hexachlorobutadiene	17.6		ug/kg wet	20.0		88.0	70-130	4.44	50	
2-Hexanone (MBK)	24.0		ug/kg wet	20.0		120	70-130	6.45	25	
Isopropylbenzene	18.0		ug/kg wet	20.0		90.0	70-130	3.28	25	
4-Isopropyltoluene	19.1		ug/kg wet	20.0		95.5	70-130	4.10	25	
Methyl tert-butyl ether	18.4		ug/kg wet	20.0		92.0	70-130	2.15	25	
4-Methyl-2-pentanone (MIBK)	21.4		ug/kg wet	20.0		107	70-130	2.76	50	
Methylene chloride	21.9		ug/kg wet	20.0		110	70-130	0.00	25	
Naphthalene	18.9		ug/kg wet	20.0		94.5	70-130	2.09	25	
n-Propylbenzene	17.2		ug/kg wet	20.0		86.0	70-130	2.87	25	
Styrene	17.5		ug/kg wet	20.0		87.5	70-130	3.37	25	
1,1,1,2-Tetrachloroethane	18.9		ug/kg wet	20.0		94.5	70-130	0.531	25	
1,1,2,2-Tetrachloroethane	18.5		ug/kg wet	20.0		92.5	70-130	2.14	25	
Tetrachloroethene	20.4		ug/kg wet	20.0		102	70-130	6.64	25	
Toluene	20.0		ug/kg wet	20.0		100	70-130	0.00	25	
1,2,3-Trichlorobenzene	18.5		ug/kg wet	20.0		92.5	70-130	2.67	25	
1,2,4-Trichlorobenzene	17.5		ug/kg wet	20.0		87.5	70-130	2.82	25	
1,1,1-Trichloroethane	21.0		ug/kg wet	20.0		105	70-130	0.00	25	
1,1,2-Trichloroethane	20.8		ug/kg wet	20.0		104	70-130	0.957	25	
Trichloroethene	20.2		ug/kg wet	20.0		101	70-130	4.04	25	
Trichlorofluoromethane (Freon 11)	25.1		ug/kg wet	20.0		126	70-130	0.791	50	
1,2,3-Trichloropropane	17.6		ug/kg wet	20.0		88.0	70-130	3.90	25	
1,2,4-Trimethylbenzene	18.0		ug/kg wet	20.0		90.0	70-130	4.35	25	
1,3,5-Trimethylbenzene	17.4		ug/kg wet	20.0		87.0	70-130	3.39	25	
Vinyl chloride	21.4		ug/kg wet	20.0		107	70-130	11.5	25	
m,p-Xylene	35.9		ug/kg wet	40.0		89.8	70-130	2.42	25	
o-Xylene	18.5		ug/kg wet	20.0		92.5	70-130	2.14	25	
Surrogate: 4-Bromofluorobenzene	*42.5*		ug/kg wet	*50.0*		*85.0*	*70-130*			
Surrogate: Toluene-d8	*51.0*		ug/kg wet	*50.0*		*102*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.0*		ug/kg wet	*50.0*		*102*	*70-130*			
Surrogate: Dibromofluoromethane	*53.8*		ug/kg wet	*50.0*		*108*	*70-130*			
Matrix Spike (4081098-MS1)	Source: SA16665-10			Prepared & Analyzed: 19-Aug-04						
Benzene	20.2		ug/kg dry	20.0	BRL	101	70-130			
Chlorobenzene	19.2		ug/kg dry	20.0	BRL	96.0	70-130			
1,1-Dichloroethene	23.6		ug/kg dry	20.0	BRL	118	70-130			
Toluene	17.4		ug/kg dry	20.0	BRL	87.0	70-130			
Trichloroethene	23.4		ug/kg dry	20.0	2.56	104	70-130			
Surrogate: 4-Bromofluorobenzene	*43.4*		ug/kg dry	*50.0*		*86.8*	*70-130*			
Surrogate: Toluene-d8	*45.1*		ug/kg dry	*50.0*		*90.2*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.3*		ug/kg dry	*50.0*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*53.9*		ug/kg dry	*50.0*		*108*	*70-130*			
Matrix Spike Dup (4081098-MSD1)	Source: SA16665-10			Prepared & Analyzed: 19-Aug-04						
Benzene	21.2		ug/kg dry	20.0	BRL	106	70-130	4.83	30	
Chlorobenzene	20.4		ug/kg dry	20.0	BRL	102	70-130	6.06	30	
1,1-Dichloroethene	22.8		ug/kg dry	20.0	BRL	114	70-130	3.45	30	
Toluene	19.4		ug/kg dry	20.0	BRL	97.0	70-130	10.9	30	
Trichloroethene	24.3		ug/kg dry	20.0	2.56	109	70-130	4.69	30	
Surrogate: 4-Bromofluorobenzene	*42.5*		ug/kg dry	*50.0*		*85.0*	*70-130*			
Surrogate: Toluene-d8	*46.7*		ug/kg dry	*50.0*		*93.4*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*51.6*		ug/kg dry	*50.0*		*103*	*70-130*			
Surrogate: Dibromofluoromethane	*54.8*		ug/kg dry	*50.0*		*110*	*70-130*			

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*Reportable Detection Limit   BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081120 - Volatiles										
Blank (4081120-BLK1)				Prepared & Analyzed: 19-Aug-04						
Acetone	BRL	20.0	ug/l							
Acrylonitrile	BRL	1.0	ug/l							
Benzene	BRL	1.0	ug/l							
Bromobenzene	BRL	1.0	ug/l							
Bromochloromethane	BRL	1.0	ug/l							
Bromodichloromethane	BRL	1.0	ug/l							
Bromoform	BRL	1.0	ug/l							
Bromomethane	BRL	2.0	ug/l							
2-Butanone (MEK)	BRL	10.0	ug/l							
n-Butylbenzene	BRL	1.0	ug/l							
sec-Butylbenzene	BRL	1.0	ug/l							
tert-Butylbenzene	BRL	1.0	ug/l							
Carbon disulfide	BRL	5.0	ug/l							
Carbon tetrachloride	BRL	1.0	ug/l							
Chlorobenzene	BRL	1.0	ug/l							
Chloroethane	BRL	2.0	ug/l							
Chloroform	BRL	1.0	ug/l							
Chloromethane	BRL	2.0	ug/l							
2-Chlorotoluene	BRL	1.0	ug/l							
4-Chlorotoluene	BRL	1.0	ug/l							
1,2-Dibromo-3-chloropropane	BRL	2.0	ug/l							
Dibromochloromethane	BRL	1.0	ug/l							
1,2-Dibromoethane (EDB)	BRL	1.0	ug/l							
Dibromomethane	BRL	1.0	ug/l							
1,2-Dichlorobenzene	BRL	1.0	ug/l							
1,3-Dichlorobenzene	BRL	1.0	ug/l							
1,4-Dichlorobenzene	BRL	1.0	ug/l							
Dichlorodifluoromethane (Freon12)	BRL	2.0	ug/l							
1,1-Dichloroethane	BRL	1.0	ug/l							
1,2-Dichloroethane	BRL	1.0	ug/l							
1,1-Dichloroethene	BRL	1.0	ug/l							
cis-1,2-Dichloroethene	BRL	1.0	ug/l							
trans-1,2-Dichloroethene	BRL	1.0	ug/l							
1,2-Dichloropropane	BRL	1.0	ug/l							
1,3-Dichloropropane	BRL	1.0	ug/l							
2,2-Dichloropropane	BRL	1.0	ug/l							
1,1-Dichloropropene	BRL	1.0	ug/l							
cis-1,3-Dichloropropene	BRL	1.0	ug/l							
trans-1,3-Dichloropropene	BRL	1.0	ug/l							
Ethylbenzene	BRL	1.0	ug/l							
Hexachlorobutadiene	BRL	1.0	ug/l							
2-Hexanone (MBK)	BRL	10.0	ug/l							
Isopropylbenzene	BRL	1.0	ug/l							
4-Isopropyltoluene	BRL	1.0	ug/l							
Methyl tert-butyl ether	BRL	1.0	ug/l							
4-Methyl-2-pentanone (MIBK)	BRL	10.0	ug/l							
Methylene chloride	BRL	10.0	ug/l							
Naphthalene	BRL	1.0	ug/l							
n-Propylbenzene	BRL	1.0	ug/l							
Styrene	BRL	1.0	ug/l							
1,1,1,2-Tetrachloroethane	BRL	1.0	ug/l							
1,1,2,2-Tetrachloroethane	BRL	1.0	ug/l							
Tetrachloroethene	BRL	1.0	ug/l							
Toluene	BRL	1.0	ug/l							

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081120 - Volatiles										
Blank (4081120-BLK1)				Prepared & Analyzed: 19-Aug-04						
1,2,3-Trichlorobenzene	BRL	1.0	ug/l							
1,2,4-Trichlorobenzene	BRL	1.0	ug/l							
1,1,1-Trichloroethane	BRL	1.0	ug/l							
1,1,2-Trichloroethane	BRL	1.0	ug/l							
Trichloroethene	BRL	1.0	ug/l							
Trichlorofluoromethane (Freon 11)	BRL	1.0	ug/l							
1,2,3-Trichloropropane	BRL	1.0	ug/l							
1,2,4-Trimethylbenzene	BRL	1.0	ug/l							
1,3,5-Trimethylbenzene	BRL	1.0	ug/l							
Vinyl chloride	BRL	1.0	ug/l							
m,p-Xylene	BRL	2.0	ug/l							
o-Xylene	BRL	1.0	ug/l							
Surrogate: 4-Bromofluorobenzene	*28.8*		ug/l	*30.0*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*28.5*		ug/l	*30.0*		*95.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*32.7*		ug/l	*30.0*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*32.3*		ug/l	*30.0*		*108*	*70-130*			
LCS Dup (4081120-BSD1)				Prepared & Analyzed: 19-Aug-04						
Acetone	15.7		ug/l	20.0		78.5	70-130	43.4	50	
Acrylonitrile	14.6		ug/l	20.0		73.0	70-130	7.26	25	
Benzene	19.0		ug/l	20.0		95.0	70-130	3.11	25	
Bromobenzene	20.9		ug/l	20.0		104	70-130	2.84	25	
Bromochloromethane	20.9		ug/l	20.0		104	70-130	5.61	25	
Bromodichloromethane	21.5		ug/l	20.0		108	70-130	3.64	25	
Bromoform	23.1		ug/l	20.0		116	70-130	0.866	25	
Bromomethane	16.9		ug/l	20.0		84.5	70-130	1.19	50	
2-Butanone (MEK)	18.2		ug/l	20.0		91.0	70-130	4.83	50	
n-Butylbenzene	19.7		ug/l	20.0		98.5	70-130	2.51	25	
sec-Butylbenzene	20.2		ug/l	20.0		101	70-130	2.93	25	
tert-Butylbenzene	20.6		ug/l	20.0		103	70-130	3.81	25	
Carbon disulfide	15.5		ug/l	20.0		77.5	70-130	5.64	25	
Carbon tetrachloride	21.9		ug/l	20.0		110	70-130	3.57	25	
Chlorobenzene	20.3		ug/l	20.0		102	70-130	0.00	25	
Chloroethane	16.0		ug/l	20.0		80.0	70-130	3.68	50	
Chloroform	20.2		ug/l	20.0		101	70-130	3.88	25	
Chloromethane	15.4		ug/l	20.0		77.0	70-130	1.93	25	
2-Chlorotoluene	20.9		ug/l	20.0		104	70-130	0.00	25	
4-Chlorotoluene	20.6		ug/l	20.0		103	70-130	0.966	25	
1,2-Dibromo-3-chloropropane	17.6		ug/l	20.0		88.0	70-130	1.69	25	
Dibromochloromethane	22.4		ug/l	20.0		112	70-130	3.51	50	
1,2-Dibromoethane (EDB)	21.6		ug/l	20.0		108	70-130	3.64	25	
Dibromomethane	20.7		ug/l	20.0		104	70-130	3.77	25	
1,2-Dichlorobenzene	17.4		ug/l	20.0		87.0	70-130	3.39	25	
1,3-Dichlorobenzene	21.1		ug/l	20.0		106	70-130	1.87	25	
1,4-Dichlorobenzene	17.0		ug/l	20.0		85.0	70-130	1.75	25	
Dichlorodifluoromethane (Freon12)	23.6		ug/l	20.0		118	70-130	4.96	50	
1,1-Dichloroethane	13.6		ug/l	20.0		68.0	70-130	3.61	25	QC-1
1,2-Dichloroethane	20.6		ug/l	20.0		103	70-130	3.81	25	
1,1-Dichloroethene	16.6		ug/l	20.0		83.0	70-130	3.55	25	
cis-1,2-Dichloroethene	20.4		ug/l	20.0		102	70-130	0.976	25	
trans-1,2-Dichloroethene	14.1		ug/l	20.0		70.5	70-130	2.11	25	
1,2-Dichloropropane	18.1		ug/l	20.0		90.5	70-130	3.26	25	
1,3-Dichloropropane	20.2		ug/l	20.0		101	70-130	3.88	25	
2,2-Dichloropropane	21.4		ug/l	20.0		107	70-130	4.57	25	
1,1-Dichloropropene	20.1		ug/l	20.0		100	70-130	3.92	25	

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*Reportable Detection Limit BRL = Below Reporting Limit

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081120 - Volatiles										
LCS Dup (4081120-BSD1)				Prepared & Analyzed: 19-Aug-04						
cis-1,3-Dichloropropene	19.4		ug/l	20.0		97.0	70-130	5.03	25	
trans-1,3-Dichloropropene	19.9		ug/l	20.0		99.5	70-130	3.46	25	
Ethylbenzene	19.4		ug/l	20.0		97.0	70-130	2.04	25	
Hexachlorobutadiene	20.9		ug/l	20.0		104	70-130	1.90	50	
2-Hexanone (MBK)	17.4		ug/l	20.0		87.0	70-130	13.9	25	
Isopropylbenzene	19.3		ug/l	20.0		96.5	70-130	2.05	25	
4-Isopropyltoluene	21.0		ug/l	20.0		105	70-130	0.948	25	
Methyl tert-butyl ether	14.4		ug/l	20.0		72.0	70-130	3.41	25	
4-Methyl-2-pentanone (MIBK)	17.2		ug/l	20.0		86.0	70-130	3.43	50	
Methylene chloride	17.1		ug/l	20.0		85.5	70-130	4.01	25	
Naphthalene	23.1		ug/l	20.0		116	70-130	1.71	25	
n-Propylbenzene	18.9		ug/l	20.0		94.5	70-130	2.09	25	
Styrene	19.4		ug/l	20.0		97.0	70-130	1.03	25	
1,1,1,2-Tetrachloroethane	21.4		ug/l	20.0		107	70-130	2.76	25	
1,1,2,2-Tetrachloroethane	20.9		ug/l	20.0		104	70-130	0.957	25	
Tetrachloroethene	20.4		ug/l	20.0		102	70-130	5.71	25	
Toluene	18.3		ug/l	20.0		91.5	70-130	4.28	25	
1,2,3-Trichlorobenzene	18.0		ug/l	20.0		90.0	70-130	5.41	25	
1,2,4-Trichlorobenzene	18.4		ug/l	20.0		92.0	70-130	3.73	25	
1,1,1-Trichloroethane	21.8		ug/l	20.0		109	70-130	3.60	25	
1,1,2-Trichloroethane	20.8		ug/l	20.0		104	70-130	5.61	25	
Trichloroethene	20.2		ug/l	20.0		101	70-130	3.88	25	
Trichlorofluoromethane (Freon 11)	19.9		ug/l	20.0		99.5	70-130	2.48	50	
1,2,3-Trichloropropane	20.2		ug/l	20.0		101	70-130	7.62	25	
1,2,4-Trimethylbenzene	20.9		ug/l	20.0		104	70-130	3.77	25	
1,3,5-Trimethylbenzene	20.4		ug/l	20.0		102	70-130	1.94	25	
Vinyl chloride	24.0		ug/l	20.0		120	70-130	0.00	25	
m,p-Xylene	40.5		ug/l	40.0		101	70-130	0.985	25	
o-Xylene	20.0		ug/l	20.0		100	70-130	1.98	25	
Surrogate: 4-Bromofluorobenzene	*30.4*		ug/l	*30.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*28.8*		ug/l	*30.0*		*96.0*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*32.8*		ug/l	*30.0*		*109*	*70-130*			
Surrogate: Dibromofluoromethane	*31.5*		ug/l	*30.0*		*105*	*70-130*			
Matrix Spike (4081120-MS1)	Source: SA16614-03			Prepared & Analyzed: 19-Aug-04						
Benzene	20.6		ug/l	20.0	0.900	98.5	70-130			
Chlorobenzene	22.1		ug/l	20.0	BRL	110	70-130			
1,1-Dichloroethene	16.3		ug/l	20.0	BRL	81.5	70-130			
Toluene	20.6		ug/l	20.0	0.800	99.0	70-130			
Trichloroethene	21.5		ug/l	20.0	BRL	108	70-130			
Surrogate: 4-Bromofluorobenzene	*30.9*		ug/l	*30.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*29.2*		ug/l	*30.0*		*97.3*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*33.1*		ug/l	*30.0*		*110*	*70-130*			
Surrogate: Dibromofluoromethane	*31.8*		ug/l	*30.0*		*106*	*70-130*			
Matrix Spike Dup (4081120-MSD1)	Source: SA16614-03			Prepared & Analyzed: 19-Aug-04						
Benzene	21.1		ug/l	20.0	0.900	101	70-130	2.51	30	
Chlorobenzene	21.9		ug/l	20.0	BRL	110	70-130	0.00	30	
1,1-Dichloroethene	16.5		ug/l	20.0	BRL	82.5	70-130	1.22	30	
Toluene	20.9		ug/l	20.0	0.800	100	70-130	1.01	30	
Trichloroethene	22.2		ug/l	20.0	BRL	111	70-130	2.74	30	
Surrogate: 4-Bromofluorobenzene	*30.6*		ug/l	*30.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*29.6*		ug/l	*30.0*		*98.7*	*70-130*			
Surrogate: 1,2-Dichloroethane-d4	*34.0*		ug/l	*30.0*		*113*	*70-130*			
Surrogate: Dibromofluoromethane	*32.4*		ug/l	*30.0*		*108*	*70-130*			

General Chemistry Parameters - Quality Control

Analyte(s)	Result	*RDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch 4081035 - General Preparation										
Duplicate (4081035-DUP1)		**Source: SA16672-01**		**Prepared & Analyzed: 18-Aug-04**						
% Solids	85.3		%		83.1			2.61	20	

This laboratory report is not valid without an authorized signature on the cover page.

*Reportable Detection Limit BRL = Below Reporting Limit

Notes and Definitions

VOC10	The VOC field preserved soil sample is not within the 1:1 weight to volume ratio as recommended by SW846 methods 5030 and 5035 but may be within the 1:1 volume to volume ratio.
vext2	Field extracted
QC-1	Analyte out of acceptance range.
BRL	Below Reporting Limit - Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A plus sign (+) in the Method Reference column indicates the method is not accredited by NELAC.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Validated by:
Hanibal C. Tayeh, Ph.D.
Nicole Brown

SA 16605 MM

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Featuring
HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: ______
- All TATs subject to laboratory approval. Min. 24-hour notification needed for rushes.
- Samples disposed of after 60 days unless otherwise instructed.

Report To: Geoinsight
319 Littleton Rd
Westford MA 01886

Project Mgr.: LM

Invoice To: SAME
W#40038240

P.O. No.: ______ RQN: ______

Project No.: 4140
Site Name: Tufts St
Location: 50 Tufts St Somerville State: MA
Sampler(s): JMF + JMS + SB

1=Na₂S2O₃ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH_3OH 8=$NaHSO_4$ 9=______ 10=______

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1=______ X2=______ X3=______

G=Grab C=Composite

Containers: / Analyses:

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	8260
16605-01	Geo 4	8/16/04	11:10		GW	2	2				X
-02	Geo-2	8/16/04	2:50		GW	2	[illegible]				X
-03	Geo-1	8/16/04	3:40		GW	[illegible]	2				X
-04	SH-MW-2	8/16/04	10:00		GW	2	2				X
-05	Geo-6	8/16/04	11:20		GW	2	2				X
-06	Geo-3	8/16/04	12:05		GW	2	2				X
-07	Geo-5	8/16/04	4:20		GW	2	2				X
-08	Geo-1 6-8	8/12/04	9:50		SO	7	2				X
-09	Geo-4 11-13	8/13/04	11:15		SO	7	3	~~x~~ IE			X
-10	Geo-1 0-2	8/12/04	9:20		SO	7	2				X

QA Reporting Notes:
(check if needed)

State specific reporting standards
If applicable, please list below.

☐ Provide MCP CAM Report
Were all field QC requirements met as per MADEP CAM Section 2.0?
☐ Yes ☐ No
(Response required for CAM report)

☒ Fax results when available to (978) 692-1114
☐ E-mail to ______
EDD Format ______
Condition upon receipt: ☐ Iced ☐ Ambient ☐ °C 5

Relinquished by:	Received by:	Date:	Time:
		8/17/04	10:55
		8/17/04	1450

Temp 5°C

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